

SCHOOL LIFE

PUBLISHED MONTHLY by the DEPARTMENT OF THE INTERIOR, BUREAU OF EDUCATION
Secretary of the Interior, HUBERT WORK - - - - - Commissioner of Education, JOHN JAMES TIGERT

VOL. VIII

WASHINGTON, D. C., APRIL, 1923

No. 8

Recent Developments In Medical Education Fiscal Administration and Cost of Schools

Half the Schools of Medicine Discontinued in 18 Years. Few Students Without Proper Qualifications Now Remain. Improvements in Past 20 Years Almost Sensational. Problems Created By the Complex Medical Training Now Provided

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Some Facts from the Educational Finance Inquiry. Increased Costs Must Be Properly Interpreted to Reach Intelligent Conclusions. Great Variation in Expenditures. State Support Only Way to Secure Complete Equalization of Opportunity

By GEORGE D. STRAYER

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FOllowing the close of the Civil War, the number of medical schools in the United States rapidly increased, until in 1906 there were 162 in the United States—more than in all the rest of the world. The educational standards, however, were considerably lower than those in other leading countries, so that the evident need was for "fewer but better medical schools." Two of the important objects to work for in the campaign for improvement, therefore, were (a) the general adoption of higher standards for admission, and (b) the merging of medical schools in cities where two or more existed. During the past 18 years the number of medical schools has been reduced by just one-half—from 162 to 81, about two-thirds of the reduction being due to mergers. The medical schools which became extinct, with a few exceptions, were low-grade institutions.

The number of colleges enforcing higher entrance requirements during the 18 years increased from 2 to 74, and the entrance requirements of medical schools of the United States are now equal to those in medical schools abroad.

The merging of medical schools resulted in a decrease in the number of medical students. The oversupply of medical schools in 1904 meant also an oversupply of medical students. The total number was reduced from 28,142 in 1904 to 14,052, the lowest number, in 1919, but since that year the number increased to 14,088 in 1920, 14,872 in 1921, and 16,140 in 1922. The reduction in the number of students was of those having lower educational qualifications, while the number of those in the higher standard medical schools increased from 1,761 in 1904 to 15,477 in 1921.

The developments in medical schools during the past 20 years have been so extensive as to be almost sensational. The

ANY INQUIRY concerning the financing of education must consider the increased cost of our public-school system. That public education is costing more now than it did 10 years ago is commonly accepted. In the year 1910 the current expenses for public education in the United States amounted to \$390,500,000. In 1920 we spent \$970,930,000 for the current expenses of our public schools. These aggregate figures must, however, be interpreted, if one would reach an intelligent conclusion concerning the support of our schools. During the period under consideration there was a very great change in the purchasing power of the dollar. There was, as well, an increase of 30 per cent in the number of days of schooling provided. To these two factors must be added the further fact of a very large increase in attendance in the upper part of the school system, where costs are necessarily high.

While we have spent many more dollars we have not in anything like the same proportion increased the support devoted to the quality of the facilities or service furnished. It appears from data which are available for the years 1921 and 1922 that the amount of money spent for education has continued to increase during this period. It is, on this account, increasingly important that we inquire concerning school costs and with

respect to the fiscal administration of our public-school system.

No less interesting than the aggregate figures are the comparisons which have been instituted among the several communities within a single State. In the State of New York, where an intensive study has been made, for the year 1920-21 in one community the current expense per pupil in average daily attendance in elementary schools was \$26. In another community within the same State the current expense per

A more extended treatment of this subject, by Doctor Colwell, will appear in Bureau of Education Bulletin, 1923, No. 18.

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Read before the general meeting of the department of superintendence, Cleveland, Ohio.

pupil in average daily attendance in elementary schools was \$272. In like manner the current expense per pupil in average daily attendance in high schools ranged from \$52 to \$1,132. In kindergartens the current expense per pupil varied from \$21 to \$113. The smallest cost per pupil in both elementary and high schools and the highest cost, as well, were found in the rural or small village school districts. The variations in cost among the larger cities were relatively small. These variations increased progressively as the size of the community decreased.

Poor Districts Pay High Taxes

The property tax furnishes almost all of the revenue for schools in the State of New York. The variations in the equalized assessed value of property per capita is as great as that shown for school expenditures. While in the main the wealthier communities spend the larger amount per pupil, it often happens that poor school districts have the higher tax rates. The scheme of aid provided by the State of New York equalizes neither the support provided for education, nor the burden of taxation borne by the several communities. It is the purpose of State aid to equalize both the opportunity for education and the burden of taxation through the redistribution of revenues collected by the State to the several communities. It has been proposed, as well, that the State provide funds in order to reward those communities which show unusual effort by maintaining their schools at a higher level or by undertaking unusual activities. The evidence from the State of New York or from any other State will, I am sure, show that it is impossible to accomplish both of these purposes by any scheme of distribution that may be proposed. If opportunity and burden are to be equalized, the State must levy a tax upon the property or incomes of all of the people, or in some other manner secure revenues by a system of taxation which bears with equal weight upon all. If these funds are distributed in order to reward the effort made by progressive communities, rather than to equalize the burden of taxation to be borne, it must follow that the poorer and less progressive communities contribute to the development of the better program of education in the more progressive communities.

State Support Essential to Equalization

The more one familiarizes himself with the systems of State aid operating in the United States, the more certainly he is driven to the conclusion that the result that we seek to achieve within the State with respect to the equalization of educational opportunities can be brought

about only by providing for State support. We have been moving in this direction. In many of the States the part of the total cost of maintaining schools borne by the State has been steadily increasing during the past decade. In one State, Delaware, complete State support has been instituted. In Maryland the State seeks to equalize opportunity by providing such funds as are necessary in support of a minimum standard school system after the county has levied a 67-cent tax based upon assessments which are equalized throughout the State. We shall make more rapid progress in the direction of providing an equalized educational opportunity for all of the children of a State when we accept as fundamental the principle of State support.

Variety in Accounting Causes Difficulty

In our inquiry in the State of New York we have found the greatest variety with respect to budgetary procedure and school accounting. Even in many of the urban communities it is not feasible upon the basis of the accounting found to determine the costs of elementary schools, of high schools, or of other parts of divisions of the school system. It was necessary in order to separate the cost of elementary education from high-school education to devise a formula which would permit the allocation of certain of the major items of the budget among these and other divisions of the school system. Careful investigations were undertaken in those communities in which accurate accounts were kept. After trying various methods of allocation it was found that the expenditures for the salaries of teachers in any division of the school system as related to the total expenditure for salaries of teachers by the school system gave the best measure for the allocation of other charges. If, for example, elementary school salaries were 70 per cent of the total expenditure for salaries, then it was found that approximately 70 per cent of the expenditures for fuel, for textbooks and supplies, for janitorial service, and the like, were chargeable against the elementary schools. In carrying through this investigation 35 cities were used. The cost calculated by means of the formula as compared with the bookkeeping costs recorded were too high in 17 cities, too low in 17 cities, and in one city the allocated cost and the calculated cost were identical. The average variation of the calculated costs from the true costs was only one-ninth of 1 per cent.

Adequate Accounting is Demanded

As satisfactory as this method of allocating cost has been in handling the figures for some hundreds of cities and vil-

lages within the State of New York, it is not defensible within a single school system. More adequate accounting should be undertaken in most of our school systems. It seems reasonable to propose that such accounting be undertaken immediately in our cities. The administration of schools in the smaller villages and rural areas by lay boards of education without adequate professional administrative service precludes the possibility of accurate accounting for these areas. Only as larger units of administration are organized can we hope to develop adequate accounting throughout the State.

Budgetary Procedure of Great Importance

The situation in the State of New York with respect to budgetary procedure is even less satisfactory than in the field of accounting. Few school systems base their estimates of expenditures upon accurately determined costs for the years immediately preceding. In many cases the merest guesses are made with respect to the funds that may be available for the period under consideration. Sound budgetary procedure requires not only accurate estimates of cost, but also estimates of income and a statement of the work program to be followed. It is of the greatest importance that budgetary procedure be improved, that boards of education adopt budgets which limit their appropriations to their income, and that they confine their expenditures to the appropriations voted. With such procedure established the electorate of the several communities involved may be expected to show greater interest in the problem of financing education and to act more intelligently with respect to the support of their schools.

School Boards in Unfortunate Position

The fiscal administration of schools is made more difficult in a number of the cities of the State of New York by virtue of the fact that the board of education is required to present its estimates to a reviewing body which has control over the amount of money to be spent for public education. This places the board of education and their executive officers in the unfortunate position of developing a budget without any assurance that it will be accepted by the general municipal authority. The work program which has been adopted may have to be thrown overboard if the reviewing authority fails to furnish the money.

An inquiry has been instituted concerning the effect of the separate financing of city-school systems. Data were secured from 377 cities located in all parts of the United States. The investigation shows conclusively that the sep-

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Principles and Types of Curricular Development

Relations Between School Subjects and Affairs of Life. Newspaper Use of Biological Subjects. Modification of Mathematical Instruction. Use of Experiences Involving the Senses

By OTIS W. CALDWELL

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THIS PAPER deals with efforts to improve the school subjects of study, as they are being changed to meet modern conceptions of education. Two types of curricular improvement will first be outlined; then a discussion will be presented of certain principles which need to be kept in mind in developing or using new types of curricular content. The types presented are illustrative rather than complete in their support of the principles later to be discussed.

At a meeting held in connection with the department of superintendence one year ago a preliminary report was made of an investigation to determine what use the public is now making of subject matter related to one of the school subjects of study. This investigation has been completed and a monograph based upon it has just been printed. So much has been said regarding the need that education shall fit people better to engage in affairs in which common life is concerned, that it seemed wise to initiate a series of investigations to determine relations that do now exist between school subjects and the situations which arise in affairs out of school. The subject of this investigation was chosen in order to determine to what extent and in what ways biology is used; and at the same time to see to what extent such methods of investigation may contribute to curricular reorganization in this and other subjects. The investigation deals with the extent and nature of use of biological material in the public press. That is, what kinds of biological information is the citizen now reading? In what ways is this information related to school work in biology? Do the public press articles make any valid suggestions as to needed changes in content or method of the school subject? Do such articles provide significant biological situations or needs which are available for use in school instruction, either as introductory, foundational, or concluding applications related to the topics of

school instruction. The so-called "case system" or use of specific occurrence with its problem and the methods and principles by which it is met has been found to be a valuable means of beginning studies of units of work in law and medicine and to some extent has been used in general education.

Classify Biological Articles in Newspapers

The briefest summary must serve our immediate purpose. Seventeen full months' issues of representative daily newspapers were secured, making a total of 492 different papers and approximately 14,000 pages. These papers ordinarily reach several millions of readers. Each of the pages was examined, and all biological articles, other than those which were paid advertisements or regularly recurring commercial stock reports, were collected and classified. Mere biological allusions were omitted, thus limiting the collection to articles clearly biological, and of news or editorial value. A total of 3,061 such articles were thus secured, these having an average column length per article of over 8 inches.

Careful study of all articles resulted in a classification consisting of eight main divisions, each main division having secondary and tertiary subdivisions. Thus "Health biology," which includes 897 of the 3,061 articles, is represented by articles classified under eight subheadings: Biology of infectious diseases, hygiene and sanitation, health education, noninfectious diseases, dietetics, drugs, first aid, and physiology. The subdivision "Infectious diseases" is itself represented by 19 further subdivisions. The other main divisions besides health, in the decreasing order of their numerical importance, are animals, plants, food, organizations of producers, general nature, evolution, and fictitious biology.

Four Groups of Outstanding Importance

A study of the tabulated number and length of articles shows the outstanding importance of the first four groups—health, animals, plants, and food. The

average length of articles upon general nature and evolution is slightly greater than that of the first four groups, but the total number of such articles is relatively quite small. Fictitious, or make-believe, or spurious biology is surprisingly small, since but 14 of the 3,061 articles belong to this group. Furthermore, the average length of fictitious articles is less than one-half the average length of all articles. This is a remarkably creditable change from a few decades ago, when so many fictitious articles appeared in the newspapers. If this study is representative, one may now read 200 newspaper articles based upon biological information and in so doing would probably encounter but one fictitious article.

Summary of Results of Investigation

There is not time, and it is not appropriate in this connection to present statements of details concerning the contents of articles under the different biological headings. A few statements in summary of the results of the investigation will show the significance of this type of study.

Of the 492 issues of newspapers studied no issue was without one or more biological articles.

The articles found are of the same general types in all parts of the country, with local variations readily accounted for by special local situations.

The proportion of biological material to the number of pages issued monthly by different papers does not vary greatly, thus indicating a fairly well-recognized need and use of newspaper copy from this field.

Health Articles Cause Improved Health

Health biology, which appears in largest quantity, thus relates interestingly to recent conclusions reached by national educational committees to the effect that health is the first aim of education. The largest proportion and greatest length of health articles appear in communities in which, from other sources, it is known that greatest effort is being made to conserve and improve human health. Whether improved health and greater interest cause the larger number of health articles, or whether the improvement in health is brought about by greater publicity can not now be decided.

Biology pertaining to health, animal life, plant life, and food are easily the dominant biological interests of the public, so far as this investigation presents dependable data.

A surprisingly small amount of fictitious biology appears in the papers studied, thus showing a most wholesome re-

spect for biological truth. This does not mean that erroneous statements do not appear. For example, it was stated that the germ causing yellow fever has not been discovered. It has been discovered, but the writer of the erroneous statement was not so informed. He did not willfully deal in fiction.

Newspapers Are Generally Accurate

Newspapers are more nearly up to date in biological accuracy than are many textbooks, since their articles are "news," preferably direct from the producer to the consumer. At the best, textbooks can not entirely keep up to date, and many of them do not make earnest endeavor to do so. A biological textbook which is one or two decades old carries more fiction than do most of our leading newspapers.

Since the advocacy of social and industrial controls, depending upon modern biology and the types of biological information which appear in the representative press are so widespread and constant, should not the school courses in biology include the topics found as legitimate ones for school use if, as we say, education is designed to help people in common life?

Finally, if these topics are those of common occurrence, should not some or many of them, or others in similar articles, be used as significant situations in presentation of topics in instruction in biology?

Other Investigations Must Be Made

This investigation provides sufficient guidance for a substantial advance in defining course content. Other investigations are needed to determine whether the public press presents the biological material which the people should have; whether courses of study in schools are in any way responsible for whatever appears in the articles dealing with biology; whether the press or the public desires to use biological material other than that which is used; whether professional biologists believe the public is securing the kinds of biological information which biologists think or can prove would be good for the public.

For a second type of effort in curricular improvement, let us turn to one of our older, more nearly standardized subjects—mathematics. Teachers in colleges, high schools, and elementary schools are in general agreement that reorganization is needed. There have recently been many investigations and reports of committees which have recommended extensive modifications of present practice in mathematical instruction. The final report of the National Committee on Mathematical Require-

ments enumerates the outstanding reasons for a reorganization of courses in mathematics.

Among many important conditions stated by this report are the following:

That much of the content of the usually required courses makes little contribution to the pupil or adult needs of modern life.

That the organization of these materials and instruction by use of them are not based upon modern psychology of learning.

Special Attention to Elementary Grades

The report emphasizes the need for giving especial attention to the elementary grades and to grades seven, eight, and nine. Several groups of workers are attempting to provide better curricular materials and accompanying methods. I shall outline the procedure of one of these groups.

Fifteen hypotheses or guiding principles were first formulated. These are based upon investigations, results of surveys, and the best guidance available in the philosophy of education. Six of these principles are:

Mathematics, in the elementary and junior high-school grades, should be primarily a tool for the quantitative thinking which children and adults need to do.

Each year should give the most intrinsically valuable mathematical information and training which the pupil is capable of receiving at that time, with little consideration of the needs of subsequent courses.

The preceding aim necessitates the inclusion in junior high school grades of certain elements of arithmetic, intuitive geometry, algebra, trigonometry, and statistics, although these are not to be rigidly classified under the traditional divisions as named.

Part of Mathematics in Civilization

Manipulation of mathematical symbols as an end should be omitted, and attention should be directed toward a better appreciation of the part that mathematics has occupied and is now occupying in the progress of civilization.

There should be a marked increase in the accuracy of computation with integers, fractions, and per cents.

Following the formulation of the above principles, an inventory test was given to a large number of children who were just entering the seventh grades in 30 cities. The purpose of this inventory was to furnish more complete information than previously existed regarding the mathematical knowledge that such children possess at the end of the sixth grade, or which the seventh-grade teacher may reasonably expect as his foundation

for work. The test consists of 125 very simple elements. The content of courses of study and the opinions of textbook writers were used as the two bases in the construction of the test. The nature of a few elements in the test are cited, together with the degree of mastery of each which pupils were found to possess.

One-third of Replies Incorrect

Write .25 as a common fraction. The per cent of correct responses was 69.4.

Does 4896 divided by 10 equal 4,896, 48.96, 489.6, or 4896? (Draw a circle around the right number.) Again almost one-third of the pupils fail.

Write 1/5 as a decimal fraction. Almost one-half are in error.

What is the average of 4, 6, 8, and 10? Two-thirds fail to average these numbers correctly.

Theodore Roosevelt was born October 27, 1859, and died January 6, 1918. His age was — years — months and — days. Only 17.3 per cent of the pupils made the correct age calculations.

It was found that there is very little in this inventory which beginning seventh-grade pupils can do with anything like 100 per cent efficiency. Those points which are answered with high success are such as: One dozen equals 12 things; 1 minute equals 60 seconds; drawing a circle, when the pupils see the word "circle." These elements are given extensive practice in the home, in the grocery store; that is, these things are learned chiefly in the out-of-school situations. If something is discovered that children know with a reasonable per cent of efficiency, the mathematics instruction can by no means claim the full credit for having secured it.

This inventory of sixth-grade arithmetic may be summarized as follows:

There are but 8 of the 125 elementary mathematical points which are correctly answered by as many or more than 90 per cent of the pupils.

There are 34 of the 125 points answered by as many or more than 70 per cent of the pupils.

There are but 59 of the 125 points answered by as many as half of the pupils.

That is, considerably more than half the pupils failed on 66 of the 125 points in this inventory.

"Half Learning" An Exaggeration

There are those who say that the outstanding indictment of our American schools is that we foster half-learning. It appears that they exaggerate, and are too generous in this hard accusation, for here is evidence that we really achieve much less than 50 per cent mastery.

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Make Washington Schools the Nation's Model

Congressional Joint Committee Urges Improvements to Place School System of National Capital Upon Highest Possible Plane. Recommends Extension of Library System with Many Branches

FINANCIAL independence for the Board of Education of the District of Columbia, an enlargement of the powers of the superintendent, an increase in the administrative and supervisory staff, greater appropriations, more adequate schoolhouse accommodations, and the establishment of a system of branch public libraries are among the recommendations made in the report of a joint committee of Congress on the schools of the District of Columbia, which was recently presented to the Senate by Senator Capper, of Kansas, the chairman.

It is expected that a bill will be introduced during the next session of Congress to put into effect the recommendations of the committee.

Investigation Has Been Thorough

During the past year this committee has made a thorough investigation of the school system of the District. The members of the committee have personally inspected many of the schools, several public hearings have been held, and a number of the leading school administrators of the country have appeared before the committee by invitation to suggest methods of procedure and practice to be followed in the organization and administration of the schools of Washington. In the report which is the result of its investigations the committee recommends that legislation be enacted which shall provide for—

(a) Appointment of the Board of Education by the President of the United States, subject to confirmation by the Senate.

(b) Financial independence of the Board of Education from the Commissioners of the District.

(c) Management of the schools and school buildings, and all pertaining thereto, by the Board of Education. The superintendent should be the chief executive and an administrative officer under the Board of Education. All other employees should be subordinate to the superintendent of schools.

Staff of Board Needs Strengthening

The committee believes that the staff at headquarters of the Board of Education should be increased in order to dispatch satisfactorily the increased responsibilities upon that staff as a result of extensions and developments of the school system.

It is urged that a business manager, who shall rank as an assistant superintendent of schools, shall be appointed, under whom shall be coordinated all of the business affairs of the Board of Education, now distributed under several different educational employees.

The committee indorses bills now before Congress (1) to fix and regulate the salaries of teachers, school officers, and other employees of the Board of Education, (2) for compulsory education and a school census, and (3) extending the free-textbook system to high-school pupils.

Increased appropriations are recommended for playgrounds, evening schools, kindergartens, textbooks and supplies, school gardens, manual training, Americanization schools, and prevocational education.

Urges Definite Policy in Building

The committee recommends that a definite policy be adopted which shall provide from year to year sufficient schoolhouse accommodations, in order to make it possible for the Board of Education to eliminate part-time instruction, the use of portable schoolhouses, the use of undesirable school buildings now accommodating classes, and the reduction of the size of classes in both elementary and high schools to the standard generally accepted as desirable.

The policy of establishing larger units of administration in the elementary schools is indorsed. These units should be sufficiently large to justify the employment of an independent principal, who should be responsible for the direction of the school unit. The committee believes that the buildings hereafter erected should have at least 16 classrooms when erected, and should be so planned that their extension into a large unit is easily possible. The committee further believes that in each such unit there should be assembly hall and gymnasium, together with adequate play space.

Manual Training and Domestic Science

In addition, the committee indorses the policy of providing for manual training, domestic science, and domestic art as an integral part of such school facilities wherever classes in grades 7 and 8 are to be instructed.

The committee believes that the junior high schools have passed beyond the ex-

perimental stage and that the organization of public education into six years of primary work, three years of junior high-school work, and three years of senior high-school work should be indorsed for the District of Columbia and should be extended throughout the school system as opportunities arise.

It is evident that the public library now renders a large and efficient service and that such service is well coordinated with the work of the schools. But it is also evident that the library's resources and equipment are altogether inadequate to meet the legitimate demands for library service alike of school and adult population, the committee finds.

The library staff, though well trained, is underpaid and is insufficient in numbers to do present work. Book and other maintenance funds are meager. But perhaps the most striking feature of the needs of the library is that it has no system of branch libraries such as is to be found in comparable cities.

Clearly the library should have a system of branch libraries so distributed that they will furnish library service reasonably near the homes of the entire population of the District, the report declares. Just as there should be in Washington the best of public-school systems, a model for the entire country, so there should be here the best of public-library systems, also a model for the entire country.



Costs and Efficiency Doubled Simultaneously

Wisconsin's expenditure for education has more than doubled in five years, now amounting to \$50,385,865, according to a bulletin of the State department of education. The cost has increased steadily since 1915-16, when \$23,250,256 was spent on the schools. Nearly \$2,000,000 was added to that sum the following year, and the year after that more than \$2,000,000 was added, making the cost \$29,074,432 for 1917-18. The next year the cost went upward by more than \$8,000,000, reaching \$37,468,035 in 1918-19. The latest increase reported was nearly \$14,000,000, bringing up the cost to more than \$50,000,000. With the growing cost of education, says the bulletin, more children are educated, a broader education is given, children are held in school longer, better equipment and better buildings are provided, textbooks are more and more furnished by the public, teachers' compensation is increasing, and higher qualifications are demanded of them.



Twelve acres will be occupied by the new Forest Park High School in Baltimore.

Kansas City Creates Special Teachers' Library

Teachers Utilize Its Resources in Planning School Activities. Librarian Visits Schools to Keep in Touch with Needs

By CLARA LOUISE VOIGT

IN Kansas City, Mo., the public library and the public schools are very closely associated. Both are under the direction of the same board, while the location of the school offices in the main library building and of several branch libraries in school buildings further facilitates cooperation.

A year and a half ago a new department was created in the Kansas City Public Library, a department that is designated as the teachers' library and which specializes in work with teachers, school supervisors, and administrative officers, and with persons who are seeking information on pedagogical subjects. Except in an indirect way, it is not concerned with the pupil, whose needs are taken care of by the children's department, school-deposit-collection department, or the reference department. The entire attention of the teachers' library is concentrated upon the field of education from a professional standpoint.

The scope and function of the department can be indicated briefly by naming some of the types of service given.

The teachers utilize the resources of the library in planning the recitation and other school activities, and in acquainting themselves with new developments in teaching technique and professional ideals and standards. They depend upon it for literature needed for university extension courses and the preparation of theses. Their study clubs plan their reading from bibliographies made upon their request. The principals ask for discussion or reports on supervisory and administrative problems. The different offices of the school system call for various kinds of data and material. Members of the school personnel scheduled for addresses come to have their reference sources located and collected.

Patrons Notified of New Literature

A service which the department is able to render to a limited extent and which seems to be especially valued, is to notify persons with special interests of all the new literature on those particular subjects.

Realizing the value of personal contacts when two agencies are working together, the teachers' librarian visits the schools from time to time and confers with the principals.

The impression must not be given, however, that the teachers' library is merely an adjunct of the public-school system. Its field is wider than that. The same service that is furnished to the public schools is also available to the private, parochial, trade, and professional schools in the community. Reference service within the library is even given to nonresidents of the city.

During the summer, when teachers are attending summer schools or are on vacation trips, their library privileges are not discontinued, but, on the contrary, the resources of the department are conveniently accessible to them through the use of the parcel post.

The teachers' library has been in operation for a short time only. The testing period has been long enough, however, to justify the wisdom of its establishment. Not only has it grown rapidly in number of volumes and of periodical subscriptions, but there has been a constant and corresponding increase and broadening in its sphere of usefulness. From the beginning its policy has been to study its field carefully, to supply the existing want in such a way as to create a further demand for service, and by adapting itself to conditions as they develop, to become a vital factor in the educational life of Kansas City.

child has been considered, and material has been chosen which pertains to it. An effort has been made to meet the needs of different types of children as well as of different individual pupils, thereby gaining flexibility as well as comprehensiveness. The topics presented are in the main suggestive of what might be taught under the subject, with the expectation that the discretion of the teacher will amplify or modify according to the ability of the pupils.

Instruction in personal health habits runs through several grades, and the approach to the subject is made from points of view of increasing maturity, thus gaining repetition without monotony. Topics have been adapted to the age, environment, and understanding of pupils in the different grades, and an effort has been made to relate the work of each year to the preceding and the following work.

To Inculcate Truths of Hygienic Living

General suggestions on method are given for the benefit of the teachers, under such topics as habit formation, educational unity, vitalizing of the lesson, group work, physical training activities, personal example of the teacher, and the use of textbooks. It is stated that the aim of the course is to inculcate old truths of hygienic living in such a way as to call for action in the daily life of the child, and that the course emphasizes and supplements the courses of instruction in physical training and domestic science, as well as the work of the medical inspector, of the school nurse, of the school dentist, and of all other agencies working for the health of the children. Cooperation of some of these agencies may be needed by the teacher in individual cases. Help may be had from such organizations as the United States Bureau of Education, the Junior Red Cross, the Tuberculosis Society, and parent-teachers associations.

The course was prepared by a committee of which Dr. Rebecca Stoneroad, director of physical training, was chairman.

According to a plan suggested by the section a committee of teachers was formed in Habana in 1921 to serve as a central information office for students and teachers who wish to come to the United States. The work of forming similar committees was continued during the past year, and one was organized in Costa Rica. Others are in course of establishment in Ecuador, Honduras, and Mexico. It is hoped to continue the organization of such committees in the capitals of Latin American countries.

Graded Course in Health Training

Recently Authorized for Use in Schools of District of Columbia. To Inculcate Truths of Hygienic Living. Covers Wide Field

To establish personal health habits in young children, to extend health conduct and care into the home and the community as well as in the school, to present information supporting the habits so that motives will be strong enough to carry over into later life, and to teach standards of living according to the laws of hygiene, a graded course of health instruction has been prepared for the elementary schools and junior high schools of Washington, D. C. The course as outlined consists of instruction in personal health habits such as diet, sleep, bathing, care of teeth, posture, exercise, clothing, and right conduct; of instruction as to environment, such as the ventilation, lighting, room temperature, cleanliness of the home and the school; of public health problems in the community, such as milk and water supply and the general control of infectious diseases, and of physiology in simple form.

In the selection and organization of subject matter, the daily life of the

Dutch Investigate Physical Training

Committee Appointed by Government Makes Important Report. Rivalry of German and Swedish Systems, Familiar to Americans, Agitates Holland. New Interest in Out-Door Sports

By P. A. DIELS
Headmaster in Amsterdam

NOW when it seems that civilization and culture in Europe are more in danger than at any other period in the past century, and now that the cry for economy in State expenses arises everywhere to the detriment of education, the question repeatedly asked in the course of the history of education, "What knowledge is of most worth?" seems to change itself into, "What knowledge costs least?" Some of our foremost scholars and philosophers, seeing the Old World tracing its steps to that dangerous path of cultural suicide, warn our Nation in eloquent appeals to guard their ancient civilization.

Economy Leads to Careful Inquiry

But every cloud has its silver lining—the necessity to economize on our teaching leads us again to an inquiry into the purpose of our teaching and education. We are compelled to ascertain whether we are on the right track, and once more we come to face problems as old as the hills, which have puzzled those who have worked and thought before us and will go on puzzling, I fear, our children and grand children, too.

Thus the old question whether the training of the mind must needs be of greater, equal, or less importance than the training of the body comes once more to the foreground. For a long time physical training was not a branch of teaching in Holland. Even at the present moment most country schools ("rural" schools, I think you call them in America) pay little attention to it, owing to the lack of interest of the local authorities and the incapability of the teachers to instruct it. In the larger centers physical instructors are employed in elementary and secondary schools.

Funds and Capable Teachers Lacking

This unsatisfactory state of things by which a great part of the population receives no special physical education has been the subject of very animated discussions in educational circles and in Parliament. On the whole, we may say that the matter meets with two great difficulties—the lack of capable teachers and the lack of sufficient funds. Of the minor difficulties I only mention here the necessity of providing for play-

grounds, rooms, etc., and the question whether physical training must prepare for army service.

Turning, without the Political Aspect

Generally speaking, Dutch physical education is based upon the German system, of which Gutsmuths was the creator. "Turnen" was for long years the principal feature, and though our gymnastic unions had no such political aims as the German "Turnverein," they enjoyed a great popularity among part of the nation. The other side of physical education, sports and games, was almost neglected; in fact, some 20 or 30 years ago practically no open-air games were practiced in Holland. This has totally changed, and for the better, I think; at present every young man or woman has some sport or sports of his own choosing, football being foremost in favor, but a great many practice swimming, boating, cycling, and several ball games, too. Cycling is very popular in Holland owing to the level roads. Of the Amsterdam population of 700,000, about 100,000 possess bicycles. It is one of the sights of Amsterdam to see the hosts of cyclists running through the streets during the busy hours of the day. Strange to say, your baseball is almost unknown in Holland, and the endeavors of some to introduce the game in our country have led to next to nothing. Yet the interest in matters dealing with physical training is steadily increasing, and there is a strong feeling in Holland that much more attention must be paid to it in future; at all events, we feel that we are on the right track now, and that the old saying "Mens sana in corpore sano" holds good for our own sad times, too.

Committee of Experienced Men

But, as I have hinted, the field is very extensive and touches so many vital national interests that a closer scrutiny into these problems became urgent. Our Dutch Government understood the importance of it and appointed a committee of able and experienced men to report about the necessary organization. That committee, of which our colleague, Mr. P. Otto, at present head master at Amsterdam, formerly a Member of Parliament, was the secretary, have published a report, of which the following is a brief summary:

In their general introduction the committee say that it is of eminent importance to the nation that all powers existing in the people—moral, intellectual, and physical—be developed. That is why physical training must run parallel with mental and moral education. That training must be given to the children in elementary schools by the common class teacher, while for secondary schools the Danish system is recommended.

Denmark students for the secondary teacher certificate may choose gymnastics (physical education) as one branch of study, together with two others, one of the latter being the principal part of study, e. g., history as chief study branch with English and gymnastics, or Latin with French and gymnastics. Those teachers are thus certificated for three branches of study, and the Government favors those who choose physical training as one of them, by appointing such persons before others.

Physical Training in Leisure Time

Special attention is paid in the report of the Dutch committee to the needs of children between 13 and 18 years of age. According to trustworthy estimates, the number of those boys and girls is about 800,000. Of these only a sixth part receive any tuition in vocational schools, in secondary schools, etc. It is of great social importance that the workmen, who enjoy at present the eight-hour working day, use part of their leisure in training their bodies in some way or other. But here the difficulty arises whether this physical training must be at the same time a preparation for the military service. One can easily fancy that politics, especially that part touching the peace ideals, plays a great part in the discussion of this matter. I shall not go into details here; my American readers know better than I do in what light true educationalists ought to consider this problem. I shall only mention that physical education is of great importance to girls as well as to boys, and that preparatory military physical training, which would exclude the girls, is nothing short of treason to the progress of the nation and of mankind. Therefore the committee strongly pleads an organization which shall include as many of the adolescents as possible. Unfortunately neither the teachers nor the rooms, playgrounds, etc., are found in sufficient number.

Afternoon Hours for Bodily Exercise

The best time for physical training is the afternoon. The committee proposes to transfer all intellectual school labor to the morning hours, thus leaving the afternoons to gymnastics, games, etc. This means a complete revolution in the

curriculum of the elementary and secondary schools, and the inspectors of teaching (something like your superintendents) oppose this plan strongly. It is to be feared that this reform will not come about in the near future. Dutch education attaches too great worth to intellectual training to permit reducing the time devoted to it.

Measurements of Gymnastic Rooms

For an ordinary number of pupils (24 to 32) the proper measurements of the gymnastic rooms are given in the report as follows: Length, 18 meters; width, 9 meters; height, 5 meters. A partly covered playground of 1,600 square meters is considered to be necessary.

An item to which the committee devotes a considerable part of their report is the training and the qualifications of teachers. They propose to create three kinds of teachers — for elementary schools, for secondary schools, and for universities. The last named are thought to become the leaders of the physical-training movement in Holland and the possibility of obtaining a university degree in physical education is advised.

As we stated, the German system, slightly altered to Dutch conditions, was for long the principal system in Holland. But of late many experts advocate a system which is popularly called the Swedish system because Sweden is the country that has adopted it as the leading principal in physical education. A short exhibition of the principles of the two systems follow here:

Principles of the Swedish System

The body serves man as a tool and as an organism. As a tool it puts him in a condition to move, to seize, and to make objects, etc. As an organism it is a collection of organs, lungs, heart, kidneys, etc., which organs enable man to keep the body in a condition fit to do its work as a tool.

The aim of the physical training should be to develop the body systematically in such a way that the two functions of the body can be properly exercised. Thus, gymnastic exercises must be of a twofold character—a hygienic part promoting the right function of the organs and a practical part developing the tool-functions of the body. The first must be based upon a thorough knowledge of physiology, the second finds its justification in the actions of the daily life of the common man. Therefore each movement must be analyzed in order to examine which part of the body is influenced by it. It is clear that such an analysis can not be made with intricate movements—that is why the genuine

Swedish exercises are localized; that is, they are restricted to one or two joints. The physical exercises must be classified according to their physiological value (their influence on the organs) and to their intensity. That is why a Swedish lesson in physical training must be divided in such a way that the right function of as many organs as possible is promoted.

Thus, are briefly stated the principles of the Swedish system as it is known in Holland. A gymnastic room in Swedish style contains several wooden racks and a collection of bars but nothing more. All the other well-known articles of furniture of a "Turnsaale," the horse, etc., are, generally speaking, not found and when found used very sparingly.

Principles of the German-Dutch System

Physical education should not restrict itself to the physical part of the human being, but should also have an intellectual and a moral character. Those three sides of an all-round education should always receive attention; and so the basis of physical training must appeal to the physical, the psychological, and the pedagogical part of a harmonious education. The advantages of the Swedish system, which are especially found in the analyzed and localized exercises, are not denied, but those in favor of the German-Dutch system assert that the same advantages are found in the more complicated exercises. But the principal argument is found in the fact that the German-Dutch system, with its variety of interesting exercises, is exceedingly attractive for the pupils and develops and strengthens moral powers, as presence of mind, self-confidence, love of work, etc. Thus in most Dutch schools the ordinary attributes of a "Turnsaale" are found and very frequently used.

Teacher More Important Than System

An interesting and animated discussion is at present taking place between the followers of the two systems. I venture to remark that, without regard to the system employed, the personality of the teacher plays such a great part in all tuition that both systems can boast of excellent results.

In Dutch schools coeducation is the rule, and the question comes to the foreground: "Should there be a difference in the physical education of boys and girls?" The report insists upon separate tuition on several grounds. In the first place, the future of the boys is generally very different from the future of the girls. In the words of Schiller, "Der Mann muss hinaus ins feindliche Leben,

Muss werken und streben, das Glück zu erjagen," and the task of woman is largely confined in the spheres of the home. The boys need more muscular strength than the girls, in whom we must always see the mothers of the coming generation.

Miss A. F. S. van Westrienen, M. D., medical school officer at Rotterdam, wrote about the problem as follows:

"Owing to historical causes girls did not receive any physical training until some years ago. The past 25 years have revolutionized the condition of woman totally and this has also influenced physical education. Now that perfect political equality between the two sexes has done away with the old prejudice that woman is inferior to man some hot-heads forget that this equality does not mean that they are not created differently. And as there is a decided difference between the physical development of boys and girls, it stands to reason that their physical education must be different."

This statement of an eminent woman physician clearly expresses the Dutch view that coeducation in physical training is not advisable.



French Schools Emphasize Physical Training

The consulting committee on physical training and athletics in the schools of France approved a preliminary draft of a budget pertaining to the detailed and rational organization of physical education in the schools of various grades. This budget provides for the creation at the Faculté de médecine of a course of instruction in physiology as applied to physical education, with a view to preparing physicians for the duties that devolve upon them in connection with physical education. The number of special instructors in physical training in the secondary and technical schools and in colleges will be increased. In the elementary schools the regular teachers will give the physical training needed and will assign to it the same importance as to intellectual training. Provision is also made for appropriate special instruction to be given pupil-teachers.—*Journal of the American Medical Association*.



To centralize inquiries and correspondence on the training and certification of teachers and to simplify the work the New York State Department of Education has established a special bureau of teacher training and certification.

Good Work by Virginia Community Leagues

*Local Leagues Organized into State Association under Direction of Governor.
Schools are the Principal Beneficiaries. Objectives of Local Leagues Depend
Upon Needs of Individual Communities*

By J. C. MUERMAN

HOW CITIZENS work together for the good of the community and gain better schools, homes, and local conditions is told in the 1922 report of the Cooperative Education Association of Virginia. This association is organized under the direction of Virginia's governor, State departments, institutions of higher learning, and a group of citizens; and for the past 18 years it has been working to make the public school a community center where the citizens may unite for the improvement of their educational, social, moral, physical, civic, and economic interests. The association cooperates with the educational forces to improve school conditions, with the health authorities in bringing about sanitary conditions and in introducing medical inspection, district nursing, and methods for the prevention of disease, with the highway department for road improvement, and with farm and home demonstration agents for better agricultural conditions.

Not Confined to Work For Schools

The work of the association is carried on through 1,675 community leagues, each organized in a school district, most of them in rural regions. These leagues average about 30 persons in membership, and each one aims to improve conditions in its own neighborhood. No league undertakes all the objectives suggested by the association, but each one takes up such work as seems most necessary and practicable. For example, in 1922, 864 leagues reported definite work for the schools, 691 for health, 399 for roads, 415 for farms, 631 for civic improvement, and 609 for social and recreational activities.

To improve the educational opportunities of the children of their communities many leagues have been working to lengthen the school term, to keep good teachers, and to help them by providing equipment and improving the school surroundings. In 234 schools the leagues supplemented the salaries of the teachers and janitors that the school term might be lengthened. Five teacherages were built; libraries were established in 89 schools; manual training, home economics, and laboratory equipment placed in 111 schools; and 177 pianos or victrolas were purchased. As a part of the campaign to improve the quality of in-

struction in the schools, a league in one community paid the cost of tuition and textbooks for a principal and about 20 teachers who were attending an extension course.

Most of Money Goes to Schools

More than \$250,000 was raised during the year by the leagues all over the State. This money was spent for community benefit, most of it going to the schools. But this sum does not adequately represent the amount of work that has been done. In two districts the leagues influenced public sentiment to abolish one-room schools and to substitute consolidated schools. One league succeeded in getting a bond issue of \$100,000 for new school buildings, and two leagues loaned money to school boards.

Many of these organizations are working for new schoolhouses, one contributing \$6,000 toward the \$18,000 the new building will cost. Others have built additions to schoolhouses. The Danieltown league built two class rooms, a principal's office, a music room, and a laboratory, furnishing the principal's office and equipping the laboratory.

A number of leagues have bought additional land for the school plant, making it possible to have ample playground space as well as garden plots. Many have bought seeds for the pupils to plant in both school and home gardens. One league spent \$2,000 to level the school grounds and put them in sanitary condition, to install playground apparatus, and build walks. Several leagues have cared for school grounds during vacation time, so that when school reopened the pupils found clean playgrounds and living shrubs, flowers, and trees. Other leagues have purchased locks for the doors of the schoolhouse, replaced broken windows, papered or painted the inside walls and ceilings, and cleaned the entire building.

Special Attention to Physical Welfare

For the physical welfare of the children, the leagues have worked hard, in one district serving free noon lunches to undernourished children, in another preparing hot lunches which cost pupils about 5 cents each. Individual cups and towels have been provided, medicine chests and first-aid kits installed, and ventilation in schoolrooms improved. In one community a tonsil and adenoid

clinic was held for the children of the whole county. School nurses have been employed to make at least one inspection during the term. Cloakrooms have been built to improve the appearance and sanitary condition of the schoolrooms. Banners and other prizes have been given to encourage the children to take an interest in clean, neat classrooms and in sanitation in general. "Clean-up" days have been celebrated and campaigns waged against flies, mice, and rats.

Two motion-picture machines have been installed, and films rented for them; three stereopticon lanterns with 600 slides have been bought. Maps, charts, pictures, magazine subscriptions, and library books have been added to the school possessions. In one district an abandoned church was bought, moved to the school grounds, and converted into an auditorium which was used daily by the pupils and in the evenings by patrons also. To provide seats for another school auditorium, a league assumed a debt of \$1,200.

A model one-room school was built by the league in one community, and in another a new room was added to the old building. Stables and garages have been provided. Fuel sheds have been built and good locks provided for them. Several schools have been lighted, the league paying the monthly cost. A few leagues have installed telephones in their schools. Flags have been presented and pole raisings celebrated.



Forest-Protection Week and Arbor Day

In a proclamation recently issued by the President of the United States, governors of the several States are urged to set apart the week of April 22-28 as Forest Protection Week, and if practicable, to make Arbor Day fall within that week. The governors are requested "to urge citizens, teachers, officers of public instruction, commercial and other associations, and the press to unite in thought and effort for the preservation of the Nation's forest resources by conducting appropriate exercises and programs and by publishing information pertaining to the waste from forest fires and ways of preventing or reducing such losses, in order that our forests may be conserved for the inestimable service of mankind."



One girl in every 10 at Pennsylvania State College earns most of her expenses. Cooking, plain and fancy sewing, taking care of children, and stenographic work are means by which the girls earn money.

SCHOOL LIFE

ISSUED MONTHLY, EXCEPT JULY AND AUGUST
BY THE DEPARTMENT OF THE
INTERIOR, BUREAU OF EDUCATION

Editor - - - - - JAMES C. BOYKIN
Assistant Editor - - - S. L. DORAN

Terms: Subscription, 30 cents per year, in advance. Twenty-five copies or more will be sent to the same address at the rate of 25 cents a year for each copy. Foreign (not including Canada, Mexico, Cuba), 55 cents. *Remittance* should be made to the SUPERINTENDENT OF DOCUMENTS, Government Printing Office, Washington, D. C., and should be by cash or money order.

APRIL, 1923

Seeking Pedagogical Rejuvenation

NO FEATURE of American education impresses foreign educators more than our summer schools. SCHOOL LIFE has printed from time to time in the past comments made by visiting Europeans, and on another page in this number is an extract from an address made before a gathering of his countrymen by Dr. Max Salas Marchan, director of one of the Chilean normal schools. Doctor Salas-Marchan made an extended tour of this country two years ago, and the recommendations that he has made as the result of his contact with American schools have been marked by insight and discrimination.

His estimate that a fourth of the North American teachers attend summer schools each year is probably under the mark. In some of the States which definitely encourage such attendance the proportion is certainly much larger. More than 25,000 of the 45,000 teachers in Pennsylvania attended summer schools in 1922, according to official statements, and without doubt other States did equally as well. In many of the popular summer schools the enrollment far exceeds that of the regular sessions of the same institutions, and the great majority of those in attendance are teachers seeking "pedagogical rejuvenation," as Doctor Salas Marchan expresses it.

In every section of the country there are several schools with upwards of 2,000 students, and the maximum is reached in Columbia University, in the east, with 12,567 students, and the University of California, in the west, with 9,698. This remarkable growth has occurred almost entirely within 30 years, and its greatest momentum has been reached within 10.

The first definite suggestion of which we have record in this country for organized summer instruction was made to Louis Agassiz by Prof. N. S. Shaler, of Harvard, in 1869; and that suggestion bore fruit in the establishment of the Anderson Biological School on Penikese Island in 1872. Doctor Vincent and

his associates in the Chautauqua movement of the seventies and eighties showed that study might be combined with summer recreation.

A "summer institute" was conducted successfully on Marthas Vineyard for many years, beginning 1878, and "summer schools of methods" began to appear in different parts of the country within the 10 years immediately following. Dr. W. R. Harper was prominent in Chautauqua affairs and was president of "Chautauqua University." When he became president of the University of Chicago he introduced there some of the ideas he had imbibed in his Chautauqua experience, notably correspondence instruction and summer sessions.

From these beginnings the American summer schools as we now have them developed, and the vigor of the American school system and the professional spirit of the American teaching body have progressed with equal steps with them.



The Advance in Medical Education

WITHIN the memory of men who do not yet consider themselves old, the degree of doctor of medicine was commonly conferred in some parts of the United States upon candidates whose only training was what they received in attendance for two winters upon a "medical college." The instruction in the second winter was identical with that of the first; juniors and seniors attended the same classes, heard the same lectures, and studied the same "lessons" from the same textbooks. The instructors were physicians in regular practice, and the instruction was largely by the lecture method. Of requirements for admission there were none; many of the students were country boys who had attended only the district schools for a few terms at most.

After fragmentary repetition courses of the sort described thousands of young men, too ignorant even to suspect their own limitations, were permitted to enter upon the practice of medicine. Many of them after years of experience became excellent physicians, but inevitably at the cost of needless suffering and shortened lives. Others honestly doing the best they could with the knowledge they had, lived out their lives in communities which accepted their ministrations without murmuring and even with satisfaction, for the unfortunate patients considered their afflictions as acts of Providence and little knew that they were enduring many ills which might

readily have been overcome by more enlightened attendance.

How the conditions have improved within the life of a generation is well set forth in Doctor Colwell's article. Present-day Americans owe far more to the medical profession as a whole than they will ever pay to its individual members. Every appeal for the better equipment and endowment of the medical colleges deserves a most cordial response.



International Reciprocity in Education

IN THAT both organizations are designed to promote commerce, intercourse, and friendship between widely separated peoples, the purposes of the Pan-American Union and the British League of the Empire are very much alike. Both emphasize community of interests in education by methods that are in many respects similar.

The efforts of the Section of Education of the Pan-American Union to promote cordial relations between the educational agencies of the American Republics are set forth in a report which reached us simultaneously with a report of the activities of the League of the Empire in bringing about the exchange of 80 teachers from the schools of England for a like number from the British colonies.

The Section of Education of the Pan-American Union will undoubtedly extend its usefulness as the years go by, but it has already demonstrated its value. The wisdom of the governing board of the union in establishing it is fully justified.

When a thoroughgoing system of exchange of teachers and professors is finally in operation, when young men and women from South and Central America come to the United States as a matter of course for those features of professional and technical education which their own countries can not well supply, and when students from this country habitually turn to the Latin Republics of the South for training in those branches of agriculture, commerce, and language, which can be had nowhere else in such degree of excellence, then the great work for which the Pan-American Union was founded will have been brought near to its accomplishment. The Section of Education is striving toward these ends, and no other agency could possibly do the work so well.



Let the teacher not teach as much as he is able to teach but only as much as the learner is able to learn.—Comenius.

Outside Reading of High-School Students

Unrestricted Choice of Young People Usually Falls Upon Novels. Required Course for Cultivation of Taste for Better Books

By FRED LEROY HOMER

Schenley High School, Pittsburgh

THE problem of directing the outside reading of high-school pupils is indeed a difficult one. So far as the writer has observed, the vast majority of young people read for pleasure nothing but fiction; and curiously enough fiction means for them *novels*. There is a feeling of indifference if not positive antipathy toward volumes of short stories. So their range of reading is excessively narrow, for it goes without saying that the novels they read are current fiction of the easier sort. Hence the disheartening lack of acquaintance with the better works of poetry and fiction and the almost total lack of information concerning geographical, historical, and biographical subjects.

So I take it that the aim of the required outside reading should be to cultivate a taste for better and more varied literature and to fill the mind with interesting and useful information concerning foreign peoples and countries, great persons, and important events.

My own way of trying to achieve these ends is as follows: From our fairly large high-school list I make a smaller list of representative books of various kinds, such as essays, travels, and adventures, biographies, nature books, and poetry, as well as novels and collections of short stories. This restricted list is made up chiefly of recent works, valuable for their subject matter and written with sufficient skill to give an added interest (perhaps wholly unconscious) to the subject matter. Four of these books must be read each semester and only one of these four may be fiction. (I think it very important that some restriction be placed upon the latter.)

Typical books which as it seems to me meet the above requirements and which I have found many pupils really enjoy reading, are as follows: Sir Frederick Treves' "Cradle of the Deep," Hurlbut Footner's "New Rivers of the North," Mrs. Elinor Stewart's "Letters of a Woman Homesteader," John Muir's "Story of my Boyhood and Youth," Vachel Lindsay's "Handy Guide for Beggars" and "Adventures while preaching the gospel of Beauty," Weir Mitchell's "Red City" and "Westways," and C. D. Warner's "My Summer in a Garden."

Now, the part of a high-school library in such a course of reading is to make it

Summer Session Attendance in Certain Universities.

[NOTE.—These institutions are members of the Association of Summer Session Directors, and the statistics were supplied by Prof. C. H. WELLER, secretary of that association.]

[Totals without duplicates.]

University.	1916	1917	1918	1919	1920	1921	1922
Boston	201	227	252	383	558	673	964
California	3,975	4,504	4,693	4,218	5,436	7,877	9,698
Chicago	5,404	4,643	3,827	4,956	5,409	6,452	6,470
Colorado	833	771	674	1,648	1,741	2,308	2,233
Columbia	8,023	6,144	6,022	9,539	9,780	11,809	12,567
Cornell	1,631	1,239	1,186	2,171	2,007	2,557	2,148
George Washington	166	230	308	668	1,033	1,342	1,223
Harvard	1,044	771	1,245	1,723	1,709	2,024	2,380
Illinois	1,447	883	748	1,314	1,381	1,976	2,165
Indiana	1,131	963	1,081	1,222	1,452	1,648	1,858
Iowa	676	802	1,042	1,260	1,420	1,747	2,065
Iowa (State College)	1,028	725	614	800	865	1,305	1,487
Johns Hopkins	596	518	326	422	442	949	785
Kansas	816	738	761	712	932	1,306	1,643
Michigan	1,793	1,449	1,301	1,961	2,225	2,794	2,803
Minnesota	1,067	983	1,245	1,467	2,025	2,687	3,174
Missouri	1,320	556	725	763	885	1,134	1,224
Nebraska	665	656	820	867	-----	1,582	2,400
New York	1,033	972	648	1,350	1,730	2,005	1,813
Northwestern	406	429	513	881	1,159	1,422	1,581
Ohio	1,181	904	911	1,340	1,404	1,543	1,870
Oklahoma	854	1,133	1,170	1,546	1,608	1,660	-----
Oregon	145	604	489	712	571	892	832
Pennsylvania	1,045	853	0	935	1,281	1,758	1,977
Syracuse	366	343	357	463	610	715	775
Texas	1,477	1,369	1,592	1,800	1,955	2,588	2,960
Toronto	354	17	50	35	85	140	194
Virginia	1,389	1,320	918	1,474	1,816	2,429	2,664
Washington	3,144	2,334	2,083	3,212	3,578	4,535	4,724

possible by providing the right kinds of books. In Schenley High School we are especially fortunate in having a well-equipped and ably-conducted school library, as well as having at our command the resources of the great Central Carnegie Library. Our school library is supported not only by the school board and the Carnegie Library of Pittsburgh but also by the pupils themselves. Last year our senior class gave \$500 to the school library, largely from the proceeds of their class play. This support enables the library to add the right kinds of books, in which work it is assisted by a committee of high-school teachers for the whole city which makes the general reading list.

Such, briefly, are the means by which we are trying to direct the outside reading of Schenley High School pupils.



Salaries in Minnesota Consolidated Schools

To determine what salaries are paid teachers in consolidated schools of approximately the same size as the Swanville Consolidated School, Swanville, Minn., the superintendent of this school submitted a questionnaire to 32 schools in Minnesota, having an average high-school enrollment of 54, an average grade enrollment of 149, four high-school teachers, and five grade teachers. The median salary paid to men teachers in the high school was found to be \$1,530; to women high-school teachers, \$1,316. The median salary of grade teachers was \$1,035.

Underpaid Polish Teachers Are in Sore Straits

Teachers and beggars are standing on the same level in Poland. I am a teacher in Zloczow, but the very low value of our money and the very, very low fees of mental workers here closes all hopes of thinking about ordering a book from a foreign country. We have to endure a great deal of hardship and misery in our struggle for our daily maintenance. We do not know what to do first with our little fees—to buy bread, clothing, or books. The choice never falls on books. In pre-war times the cost of a book was the tenth of a pair of trousers; now a book and a pair of trousers amount to the same. Therefore there is no great difference between beggars and teachers. Books are luxuries. The publishers have not enough means to cover the expenses of their publications. The financial trouble and the rapid swaying of the mark makes the entire critical situation more formidable.—*Letter from Elazar Bernstein.*



Nearly 4,000 students will be provided for in the new George Washington High School, New York City, for which ground has just been broken. The school will be situated at the northern end of Manhattan Island on a hill formerly occupied by Fort George, overlooking the Hudson and Harlem Rivers, with a view of Long Island Sound. When completed the school will cost approximately three and a half million dollars.

Recent Developments in Medical Education

(Continued from page 169)

improvements in admission requirements have been paralleled by similarly rapid improvements in other respects, endowments of medical schools have been increased, new and larger buildings have been erected, more and better equipped laboratories have been added, well-selected libraries have been installed, more all-time and better trained professors have been secured, new and larger teaching hospitals have been built, or a larger control of other hospitals has been secured, and greatly improved methods of instruction have been adopted.

Improved Methods were Essential

Indeed, these developments were absolutely essential to enable the medical schools to provide instruction in accordance with the present-day knowledge of medicine. Besides the changes in the character of the medical school and of medical education, the great expansion of medical knowledge is also making necessary improved methods in other directions. Several problems have arisen directly or indirectly from the more complex medical training which is now furnished to medical graduates. Some of these are as follows:

(1) Medical schools have found it necessary to limit the enrollment of students.

(2) The cost of furnishing a medical education has been tremendously increased.

(3) There is a larger demand for skilled teachers, especially in the fundamental medical sciences or preclinical subjects.

(4) There is an increasing trend toward specialization and group practice of medicine.

(5) There is a growing demand for a revision of the medical curriculum by which the laboratory and clinical subjects will be better correlated.

(6) There has developed a complaint regarding the lack of general practitioners, especially in the thinly settled or rural districts.

Limitation of Enrollment in Medical Schools

A few decades ago the medical course consisted mainly of didactic lectures and no limitation of enrollments was necessary. As classes grew larger, the size of lecture amphitheaters was increased, in some instances providing seats for classes of 500 or more students. Even after laboratory courses were added, these schools provided enormous laboratories, particularly in anatomy and chem-

istry, and a few colleges had laboratories large enough in which to teach, at one time, several hundred medical, dental, and pharmacy students.

Of the modern medical school, however, the curriculum has become more complex and the students are taught largely in small sections, especially in dispensaries and hospitals, so that a larger number of individual teachers is required, and administration is more difficult. To prevent confusion and to secure the maximum efficiency, therefore, it has become necessary for medical schools to admit no more students than their teachers, laboratory space, and available hospital and dispensary facilities will permit.

Do We Need More Medical Schools?

Well-qualified students applying for admission to medical schools have rapidly increased in number in the past three years (1920-1922). This, coupled with the tendency of medical colleges to limit their enrollments, has caused some anxiety lest some well-qualified students will be unable to secure admission to acceptable medical colleges. To prevent such a condition, some medical schools which have placed their limits at extremely low numbers, 25 or 30 in a class, should enlarge their facilities so as to admit larger numbers. A medical school with a complete corps of instructors should be able to handle from 50 to 75 students in a class. The enrollment of smaller numbers causes a serious disproportion between the fees paid by the student and the much larger sum expended for his instruction. Unfortunately, some medical schools are not sufficiently financed to care for even moderate-sized classes.

Increased Cost of Medical Education

The cost of conducting medical schools has been tremendously increased during the past 25 years. Buildings have been enlarged and increased in number, making necessary a greater cost for lighting, heating, and janitor service. A larger expenditure is necessary for administration, for records, and for clerical assistance. The greater number of laboratories has increased the cost for equipment and maintenance. A larger expenditure is required also for medical research, for the maintenance of library and museum, and for dispensaries and hospitals, unless satisfactory use can be made of city, State, or private institutions. The largest single item, however, is the expenditure for salaries paid to the essential expert teachers who devote their entire time to teaching and research in the laboratory departments. Salaries are now paid by several medical schools also for

full-time professors in the clinical departments where heretofore these chairs were occupied by those engaged in practice, the prestige from teaching positions being frequently more valuable than the salaries. If clinical teachers are generally placed on a salary basis, the expense for instruction will be still further increased.

Fees Pay One-Third of Cost

Where formerly medical schools could be maintained on students' fees alone, and frequently with a profit to the owners, now, with the extensive developments which were necessary to furnish a training in modern medicine, the cost is nearly three times greater than the sum obtained by students' fees.

In the campaign for the improvement of medical education emphasis was laid on the need of expert teachers who would devote their entire time to teaching and research in the fundamental medical sciences. There were few graduates in medicine who had prepared themselves as specialists in teaching, so that many of these places were filled necessarily by graduates in arts and sciences who had no medical training. Others, however, had secured their doctorate in philosophy or other higher degrees and had majored in the medical sciences which they were teaching. Even with these nonmedical teachers, however, and as medical schools have continued to expand, the lack of those who are prepared to teach the preclinical branches has become more and more serious.

Specialization in Medical Practice

During the past 40 years more progress has been made in the fields of medicine than in all previous centuries. Aside from the field of anatomy, medical knowledge formerly consisted largely of theories and deductions based on observations and clinical experience in the care of the sick. With the work of Pasteur, however, an era of medical investigation began which, within the next several years, definitely established the germ origin of most of the common diseases. The definite knowledge of bacteria led in turn to methods of preventing infection, thereby making possible the marvelous developments in the field of surgery. Theory and guesswork gave way to demonstrable facts in the cause, cure, and prevention of disease, and the teaching and practice of medicine were revolutionized. Instead of a short two-year course of lectures, the medical school now gives instruction in eight or more laboratories, as well as in dispensaries and hospitals, covering four years of

eight or nine months each. The curriculum has become more and more complex as the valuable methods of diagnosis, treatment, and prevention of diseases have been multiplied.

With this greatly increased field of medical knowledge it is but natural that there should be an increasing tendency for recent graduates in medicine to limit their practice within the narrow lines of some specialty. No physician can expect to attain a high degree of efficiency and skill in all medical knowledge, including the many and widely differing methods of treatment. The public generally are coming to appreciate the importance of going to some specialist to secure treatment in accordance with the latest and best methods. Instead of the general practitioner so commonly found heretofore, the tendency is toward the establishing of groups of physicians in clinics where several specialists will work together and where patients can receive whatever special treatment the conditions may indicate.

Revision of the Medical Curriculum

The medical curriculum has always been a subject for discussion at educational conferences and changes of greater or less consequence are frequently made. With the rapid expansion of medical knowledge and the consequent enlargement of the curriculum, an unsatisfactory situation has developed whereby the laboratory subjects, anatomy, physiology, biochemistry, etc., are taught in the first two years separately from the clinical subjects, medicine, surgery, ophthalmology, etc., which are taught in the last two years of the medical course. As a consequence, the student on entering the third year considers that he has "finished" the work in the laboratory sciences and in many instances proceeds to forget, even if he has ever learned, the essential facts of those sciences and their relation to the clinical subjects. There is at present a general demand for a reorganization of the curriculum whereby the laboratory and clinical subjects will be taught more nearly parallel in order that a closer correlation of the two groups of subjects may be obtained.

Laboratories too Far from Clinics

One of the chief difficulties in securing this cooperation is that the laboratory departments are in a separate building from the clinical departments, and in some schools the laboratory and clinical departments are several miles apart or even in different cities. There are also some medical schools teaching only the laboratory subjects, no facilities being available for the teaching of the clinical subjects.

The needed revision in the medical curriculum, therefore, means first of all a complete plant which not only should include laboratory and clinical subjects, but also should be on the university campus in close proximity to the pre-medical sciences, physics, chemistry, and biology. This will be important particularly in the needed development of graduate medical courses which should be under the direct supervision of the graduate school of the university.

Migration of Physicians to Cities

Physicians are following the general trend of population toward the cities, but in a larger proportion. Statistics show that 47.1 per cent of the population of the United States is now contained in cities of 5,000 and over, while 63 per cent of all physicians are located in those cities.

The scarcity of doctors in rural communities is not due to an inadequate supply of physicians, since the shortage in rural communities is more than offset by the oversupply in the cities. There is no need, therefore, for special methods to swell the ranks of the medical profession. As already shown in this article, also, the numbers of medical students, even under the higher entrance requirements, are so large as to make it difficult for medical schools to provide for them.

While there always has been a scarcity of physicians in rural districts, the situation became more acute when the war furnished the opportunity for many physicians to get away from the country districts. Then at the close of the war they obtained postgraduate work and sought more favorable locations. Meanwhile investigation of many rural districts from which requests for physicians have come shows that in most of them physicians could not make a livelihood without undue sacrifice and difficulty.

Education for All Practitioners

As already shown in this paper, the field of medical knowledge has been greatly increased during the past 50 years, making necessary a more extended and complex medical curriculum, which, in turn, requires laboratories, library, museum, and other equipment such as is possessed by all our recognized colleges. Essential also are a large hospital and an outpatient department where the students are instructed at the bedside in the diagnosis and treatment of diseases.

Before he can independently assume the right to care for sick or injured people the physician at the present day, after graduation from the high school, must secure the following education:

Interchange of British and Overseas Teachers

Eighty Teachers of Great Britain Go to Canada, Australia, New Zealand, and South Africa by Exchange

TO widen the outlook and experience of teachers throughout the British Empire, an exchange of teachers between the United Kingdom and distant parts of the empire has been carried on for the past two years by the League of the Empire, an association which aims to promote cooperation between the different countries and colonies under the British flag. According to this plan, which is approved by the Board of Education, about 80 teachers from the United Kingdom will take the places of an equal number of teachers in Canada, Australia, New Zealand, and South Africa. London will receive 50 of the visiting teachers, other English cities and towns 20, and Scotch towns the remainder.

Educational authorities in the dominions cooperate with the educational authorities in the English and Scotch schools in making the exchanges. Towns taking part in the plan do not undergo any extra expense, since the teachers are paid according to the salary schedule of the place in which they are visiting.

Overseas teachers who come to London are placed in elementary schools of different types, so that they may get varying kinds of experience. The League of the Empire acts as host, arranging for them to visit places of historic interest both in England and on the Continent. About 50 teachers who have been visiting in London schools went to Italy during the Christmas holidays and were received by the Pope.

(a) Two or more years of work in a recognized college or university.

(b) Four years of eight or nine months each in an acceptable medical school.

(c) One or more years spent as a resident physician or intern in an approved hospital.

If instead of entering general practice he wishes to specialize in some narrower line, such as surgery, children's diseases, eye, ear, nose and throat, etc., he should also take—

(d) Two or three years of review courses and higher apprentice work with some physician who has already attained proficiency in the chosen specialty.



New York city's schools will join in observing the city's fourth annual music week, which will be held April 29-May 5.

New Special Honors Plan at Smith College

Students of Outstanding Ability Have Opportunities Which Can Not Be Realized in Ordinary Work of Classroom. Differs From English Plan. Prescribed Subjects in First Two Years

BRILLIANT students at Smith College may be excused from regular lectures and recitations after the first two years to work for honors in a special field, as told in a previous number of *SCHOOL LIFE*. By "field" is not necessarily meant one subject, as subjects are usually understood in college; for instance, honors are obtainable not in Latin or Greek alone, but in classics, or a combination may be made of modern language, or of history of a major subject with government, or vice versa, and other subjects intimately allied may be connected. Students whose average rating is at least B for the first part of the course may apply for the opportunity to enter the special work.

Each student whose application has been approved by the committee in charge of special honors and by the department in which her chief study is to be followed is placed at the beginning of her junior year under the guidance of a general director who plans with her a series of eight units of study in her chosen field, two units being equivalent to the full work of one semester. Six of these units, the work of the junior year and the first semester of the senior year, are distributed among the subdivisions of her chosen study; two subdivisions are usually followed simultaneously. These subdivisions may coincide with single units of study and may change with each semester, or two units may be devoted to one subdivision.

Students May Choose Special Instructors

The work is planned for each individual student under a special instructor, but should several candidates elect to follow the same work with the same special instructor a small group may be combined in a little seminar or class for report and discussion. Each candidate will be allowed, as far as practicable, to choose her special instructors. Honor students may in any semester be advised or required to attend such courses or parts of courses as seem advantageous for the pursuit of the selected studies; but these students are not thereby obliged to fulfill the class requirements or to take the final examination in such courses. Candidates for special honors are exempted from all requirements exacted of other students during the junior and senior year, with the exception of the requirement in philosophy and Bibli-

cal literature. This requirement should be completed in the sophomore year.

The two units of the last semester of the senior year will be devoted to the writing of a long paper on some subject chosen within the student's field and to a general review preparatory to an extensive examination covering the whole range of study of the last two years. The paper, in typewritten form, will be placed in the library after acceptance.

Honors are awarded in two grades, honors and highest honors, according to the quality of the work done. In the event of a student's failing to be awarded either grade at the end of her senior year, she may yet be granted a pass degree if her work is of sufficient merit. A student who on grounds of health or other serious cause finds it impossible to continue her honors work may petition to withdraw, resuming her position as a candidate for the degree without honors, or with such departmental honors as may be open to her. Her petition will be granted if approved by the department in charge of her work and by the committee on special honors.

While the system resembles the honor schools of the English universities in giving the student a comprehensive view of her field in uninterrupted and intensive study of its various parts, it yet differs materially from these schools in requirements and in organization, for it demands that the first two years of a student's work be devoted to a wide range of prescribed subjects, and it is organized to meet the needs of each individual candidate for honors. The same curriculum of study is not necessarily devised for all students in one department, and the same examinations are not necessarily set for all; both study and final examinations are based on the program drawn up separately with each student by the general director of her course.

Princeton Professors Retire On Half Pay

Princeton University trustees have adopted a plan for retirement of members of the faculty, under which any member of the university teaching staff may be retired at half pay at the age of 65, and must be retired at the age of 68, except in special cases, in which the trustees vote that an individual be continued in active service.

Higher Standards Desired for Virginia Teachers

Higher professional and academic standards for certifying Virginia teachers were urged at a conference of representatives of all the State institutions engaged in teacher training. This conference recommended that after 1924 only candidates who have a certain amount of preparation should be admitted to the elementary professional programs of study conducted by the State. Candidates who are not graduates of a four-year high-school course or who do not hold a first-grade certificate should be tested by the State department, which should conduct examinations similar in scope and quality to the college entrance board examinations, according to the recommendations.

Correspondence courses should be accepted toward certification by the State department, according to a resolution of the conference, provided that the courses are offered by standard institutions whose degrees are recognized by the State board of education and that the institutions conducting the correspondence courses grant similar credit toward their degrees. Believing that residence work should supplement correspondence courses, the conference passed a resolution that no institution should issue a certificate of graduation from a two-year, three-year, or four-year course unless a full year of residence work has been completed in that institution.

Negro Health Week Widely Observed

To stimulate general interest in health problems and health education among negroes the ninth annual negro health week, April 1 to 7, will be observed by churches, schools, health associations, and many other organizations throughout the country in cooperation with Tuskegee Institute and the National Negro Business League. The program of the week will begin on Sunday with sermons and lectures by clergymen, doctors, and other qualified persons and will include a fly and mosquito day, a tuberculosis day, a children's health day, a church sanitation day, and a general clean-up day. The United States Public Health Service has prepared a health week bulletin for use in this work.

Whatever first attaches to the tender age of children, whether good or bad, remains most firmly fixed, so that throughout life it may not be expelled by any after expression.—*Comenius*.

Consolidation of Schools in Iowa

Progress Was Slow at First. Centralization Now Accomplished in Several Ways. Can Not be Forced on Any Community. Requirements for State Aid

By JAMES F. ABEL

Assistant in Rural Education, Bureau of Education

TO PUT a four-year high school and a well-organized graded school within reach of every boy and girl in Iowa, the people of that State are rapidly consolidating their rural schools. According to a bulletin issued by the State superintendent of public instruction, Iowa has 439 consolidated schools, enrolling nearly 70,000 pupils, of whom nearly half are transported to and from school by the district authorities.

History.—In 1895 the people of Buffalo Center township, making use of a law of 1873 which permitted any township to do away with subdistricts, consolidate its schools, and become an independent district, formed an independent district embracing the entire civil township, and voted bonds for the purpose of erecting an eight-room building. Two years later transportation of pupils was authorized by law, and Buffalo Center began transporting some of the children.

Once Begun, Progress Was Rapid

In the next 18 years only 11 more consolidations were effected. The general assembly of 1913 authorized State aid for consolidated schools. By 1917 they numbered 238. Then for two years little was done because of ambiguities in the law. This was largely corrected by the assemblies of 1919 and 1921. In the past two years over 200 new schools have been formed.

The consolidation law.—The laws of Iowa provide several ways of bringing about centralization. The specific consolidation law is rather detailed. One-third or more of the qualified voters residing in any contiguous territory of not less than 16 sections in one or more counties may present a petition for the formation of a consolidated independent district to the county superintendent of the county in which the largest number of the qualified voters in the proposed district reside. Within 10 days the county superintendent must set and give public notice of a place and date where and when anyone residing upon or owning land within the proposed district or anyone who would be injuriously affected by the formation of the district, may file objections to the consolidation. Within five days after the final date set for filing objections the county super-

intendent shall overrule or sustain the objections filed and fix the boundaries of the proposed consolidated district, having due regard for the welfare of adjoining districts. He must notify each objector of his decision. An appeal from the decision may be taken to the county board of education by any objector, in which case the county board conducts a hearing and renders a final decision on the boundaries of the proposed district.

Determined by Popular Vote

If no objections are filed or the objections are overruled, the county superintendent calls an election in the proposed district to vote on the consolidation. If the district is to include a city, town, or village with a population of 200 or more inhabitants, the voters residing outside the limits of the city, town, or village vote upon the proposition separately. A majority of the votes cast by the qualified voters either within or without the city, town, or village against the consolidation defeats it. If the consolidation carries, the organization of the consolidated independent school corporation is completed by the election of a board of directors.

Any consolidated district having once been organized can not be reduced to less than 16 sections. It may be dissolved by process of petition and election. No consolidated district shall be so formed as to leave any other school corporation with an area of less than four sections of contiguous territory. In general the boundary lines must follow those of districts already established, but the county board may fix meandering streams or public highways as boundaries if it seems best to do so. If, in forming a consolidated district, any school township is left with one or more pieces of territory each of four or more sections, each piece becomes a rural independent district, or if the pieces are in a contiguous body the territory becomes a school township.

Must Furnish Suitable Transportation

The transportation law.—The school board of a consolidated school corporation or school township maintaining a central school is required to furnish suitable transportation for every child of school age within the district and outside the limits of any city, town,

or village. In carrying out this provision the board shall make contracts in writing with suitable persons to furnish transportation and adopt and enforce such rules and regulations as seem necessary for the protection of the children. The board is not required to send a vehicle of transportation off a public highway for school children. It may, because of bad weather, suspend transportation on any route for any day or days.

Aid Conditioned on Suitable Equipment

State aid.—All State aid to consolidated schools in Iowa is conditioned on suitable school grounds and the necessary departments and equipment for teaching agriculture, home economics and manual training, or other industrial and vocational subjects, such subjects being a part of the regular course and taught by teachers holding certificates showing their qualification for the work. The aid must be approved by the State superintendent and is awarded as follows:

1. A two-room school, \$250 for equipment and \$200 annually.
2. A three-room school, \$350 for equipment and \$500 annually.
3. A four or more room school, \$500 for equipment and \$750 annually.

No aid is granted consolidated schools for maintaining normal training courses, nor are they permitted to qualify for aid as standard rural schools.

May Build Teachers' Home

Buildings, sites, and taxes.—A consolidated district may take and hold not to exceed 10 acres for a school site and receive additional ground by donation. It shall submit to the voters of the district the question of a tax for erecting a school building or a superintendent's or teachers' home or making repairs in excess of \$2,000 on any school building. It may submit also the question of the location of the building, but if there is a town, village, or city with a school population of more than 25 in the district, the building must be located within the limits of the town, city, or village, or upon lands contiguous to its limits. The board may levy annually for general school purposes a tax that will bring funds not to exceed \$65 for each child of school age, or if an approved high-school course is maintained, \$80 for each child.

Favorable conditions.—Where the legal initiative for consolidation must be taken by the people of a locality and it is safeguarded by hearings and elections, consolidation necessarily "grows out of the soil." It may be encouraged by State and county officials but it can not be forced upon any community by them. That it is progressing so rapidly in the State is evidence that it is commanding itself to the people of Iowa. No other

State has so level and unbroken a surface, or a population so uniformly distributed. No other State has more one-teacher schools. The department of rural education in the State Teachers' College at Cedar Falls estimates that there are 1,100 natural community centers where consolidated schools may be established. Probably there is no place in the United States where there is better opportunity for the patrons of the rural schools to prove the worth of the consolidated school.

Specific Requirements Must Be Met

Standards set by the State department.—In its bulletin on Iowa's consolidated schools the State department lists the specific legal requirements that the school must meet in order to receive State aid and gives also an outline of the additional standards set by the department. The latter are of special interest in that they indicate the type of school being built in the State.

1. It is estimated that 24 sections is about the least area that will have property valuation sufficient to maintain a good grade and high school without unduly burdensome taxes.

2. The department requires a school site of at least 5 acres. It suggests that there be ample space for the building with the ground in front of it landscaped, a place for community picnics and such community gatherings as may be held on the grounds, playgrounds large enough to accommodate the school children and to provide for community games, an agriculture plot including an orchard plot, and room for parking facilities.

Building Must Contain Community Room

3. Among the building requirements are proper heating, lighting, and ventilation, rooms for domestic science, manual training, and agriculture, a gymnasium and community room not less than 60 by 35 feet, fireproof stairways with 12-inch tread and 6-inch rise, and toilets on each floor of the building. The type of building favored is the two-story unit-construction plan.

Costs are reported for 78 of the 92 buildings erected since January, 1920. On only 3 of them the expenditure was less than \$50,000; 47 cost from \$50,000 to \$100,000; 25 from \$100,000 to \$200,000; and 3 more than \$200,000.

4. It is recommended that the board select for superintendent a man of strong personality, in sympathy with rural life, interested in community activities, a college graduate who has made a careful study of school transportation and knows how to organize it, and who has had not less than three years of teaching experience.

Our Summer Schools Impress Chilean Educator

Says Attendance Produces Constant Pedagogical Rejuvenation. Urges Establishment of Similar Schools in Chile

THE TEACHING and administrative force should attend each three years, for example, the summer courses of six weeks offered by the normal schools and the Institute of Pedagogy. In Chile we had courses for teachers of secondary schools from 1905 to 1912, held in Santiago for two or three weeks in September. The initial effort was not successful, and since 1913 they have unhappily been relegated to oblivion.

In the United States, on the contrary, these brief courses, not only for teachers but for all those who wish to freshen and broaden their information, are in full bloom; they are a necessary attachment to universities, to all normal schools, and to a great number of colleges. It is one of the most interesting of spectacles and it reflects the constant pedagogical rejuvenation which animates the teachers of the United States to see how they flock from the most distant regions to put themselves into contact at these centers of study with the leaders interested in injecting greater vitality into the North American system of education. To these courses, which are held in the summer, they consecrate six weeks of vacation and the savings of the year, which go to pay expenses of travel, residence, and training. On returning to their homes the teachers carry with them not only more knowledge but a more attractive vision of their work and a firmer desire to meet their responsibilities. The summer courses must be begun in our Pedagogical Institute and in the normal schools as soon as possible.

It is a moderate estimate to say that a fourth of the North American teachers in service, or about 175,000, attended the summer schools of 1921. If to this number there is added the number of those who this year were enrolled in extension courses in the colleges, universities, and normal schools, the number would be even more notable.—*From an address by Maximiliano Salas Marchan, Director José A. Muñoz Normal School, before the Chilean National Educational Association.*

Improved Personnel Will Result

5. The qualifications set for teachers in the consolidated schools are of a kind that will inevitably result in an improved personnel. A grade teacher shall be a high-school graduate, holding a first grade county certificate or one of higher grade, and with at least 12 weeks of special training for the grade work she is to do. The department recognizes this standard as somewhat lower than that commonly accepted and hopes to raise it in the near future. The 12 weeks of special training is required on the ground that it can be obtained in any one summer and that there can be no good excuse for any grade teacher not having at least that minimum of training.

High-school teachers must be college graduates if the high school is to be given approval for four years of work.

Special teachers must have special certificates for the subjects they are to teach. In manual training and agriculture, 6 college semester hours are required for certification; in domestic science, 30 hours. The department announces that it will require an increasing amount of preparation as teachers become available.

Superintendent to Direct Transportation

6. Transportation is considered to be the difficult problem of consolidation. It is suggested that the superintendent be given full supervisory authority over it, that he select all drivers, lay out routes, establish time schedules, and exact daily reports.

Costs.—Fourteen consolidated schools of Buena Vista County are compared with 14 large first-class city schools of the State. In the former the tax levies ranged from 24.5 to 65.6 mills; in the latter from 67 to 124.4 mills. The claim is made that "The consolidated school is the cheapest school in the State of Iowa, giving 12 years of education to the boys and girls of the community."

Summary.—A summary of consolidated school facts for the State:

Number of consolidated school districts authorized by vote up to Sept. 1, 1921	439
Number of consolidated schools maintained for school year 1920-21	368
Number of pupils enrolled June, 1921	68,619
Number of pupils transported	34,743
Number of pupils transported by motor busses used	8,147
Total cost of transportation	\$1,641,008.20
Average cost of transportation per pupil	\$47.23
Cost of new buildings since January, 1920	\$10,000,000.00
Number of buildings built since January, 1920	28

Professional View of Pennsylvania's Program

Report of Committee of Educators from Outside the State on Recent Developments. Teachers Responsive, State Department Efficient, and Expenditures Entirely Reasonable

TO OBTAIN for the teachers of Pennsylvania an unbiased professional judgment of the value and effectiveness of the present program of education in meeting the needs of the State, the Pennsylvania State Education Association, which includes 99 per cent of the teachers of the State, appointed a special committee of educators chosen from outside the State. This committee included John W. Withers, dean of the school of education, New York University; Frank Cody, superintendent of schools, Detroit; Thomas E. Johnson, State superintendent of public instruction, Michigan; Payson Smith, State commissioner of education, Massachusetts; and Charl O. Williams, formerly president of the National Education Association.

Teachers Eager For Improvement

The report of the committee was recently made public. The program of education is commended as being sound in theory, readily adaptable to changing conditions and needs, and productive of great improvement in the schools. One of the finest evidences of the success of the program, according to the committee, is the remarkable response of the teachers of the State to the new demands for improved qualifications. For nine weeks during the summer vacation of 1922 more than 25,000 teachers attended summer schools, taxing the colleges and normal schools of the State to their utmost capacity to accommodate them. Fully one-third of the 45,000 teachers of the State are attending extension courses on Saturdays and after school hours during the present school year. Nearly 60

per cent of the entire corps attended summer schools and spent every dollar of their increase of salary, and sometimes more, for professional improvement.

That the State department of education is well organized and manned is another conclusion of the report, which says that the various bureaus of the department are rendering highly efficient service to the schools, saving the State more money than the cost of operating them. From the standpoint of service which the department is rendering and the cost of State departments of education elsewhere, the committee concludes that the State department of education is not costing too much, and urges that larger sums be made available to meet the traveling expenses of the members of the department staff.

State Cannot Afford to Drop Program

The committee further concludes that the State is not paying too much for public education, but too little, and compares the actual expenditure on education with the corresponding expenditures of other States presenting data similar to that cited in the survey of fiscal policies of the State by Harlan Updegraff and Leroy A. King, as reported to the citizens' committee appointed by Gifford Pinchot, now governor of the State. Finally, the committee asks whether Pennsylvania can afford not to raise the money requisite for carrying out the present State program of education, and replies emphatically that it can not, adding that it is hardly probable that the people of the State will fail to meet the emergency when they fully realize the present situation.

Nursing Course Leads to Degree

In cooperation with accredited hospitals in Columbus, the Ohio State University offers a "science nursing course," in which the work parallels closely the first three years of the home economics course and the three-year course usually given in schools for nurses. Upon the satisfactory completion of the work, which takes five years, the student will be recommended for the degree of bachelor of science and a diploma in nursing. If after the first year of work a student wishes to take another course in the university instead of the nursing course, she may do so without loss of time or credit.

Furnish Dramatic Service to Schools

Dramatic extension service to schools, communities, and various organizations throughout Pennsylvania is supplied by the Penn State Players. Not only are the players prepared to produce entertainments of their own in various communities, but they are endeavoring to maintain a dramatic clearing house and information bureau for amateur work in all parts of the State. Two repertory companies have been organized and they are prepared to give comedies, farces, and serious plays. A complete repertory stage has been added to the equipment and this can be adapted to any hall or theater.

Nevada Solicitous for Education of Indians

To educate the Indian population of Nevada, the State department of education is cooperating with the Federal Government in encouraging the Indians to attend the public schools. The 1920 Federal census showed that Nevada had 2,040 illiterate Indians, accounting for more than half of the 3,802 illiterate persons in the State. The large number of Indians is the cause of the high percentage of illiteracy in the State as compared with neighboring States on the east and north, according to the Nevada Educational Bulletin.

The Federal Government, through the Indian agency at Reno, which has charge of all the Indians in the Nevada public schools, pays tuition to the school districts for all Indian pupils at the rate of 40 cents a day for each pupil. For the school year 1921-22 a total of \$10,720.99 was paid to 31 districts, an average of about \$345 for each district. All such money is turned into the county treasury, where it is placed to the credit of the school districts.

The Indian children are as a rule very tractable in school and eager to attend school and to learn, says the Bulletin. Some of the Indians have ceased to be wards of the Government and have removed from the reservations, no longer maintaining their tribal organization. These have adopted the customs of white people and have become citizens of the State, and in providing education the State and the counties make no difference between them and other races.

What About the Superbright Pupil?

The following are some of the things that we might do for the pupils of supermentality:

1. Leave them alone and concentrate our attention on the dull and feeble-minded.
2. Give them busy work to keep them from getting into mischief.
3. Use them as monitors in giving extra help to the slow.
4. Allow them to take extra courses.
5. Allow them to master the normal course of study and graduate in half time.
6. Group on the basis of mental ability and enrich the curriculum for the bright sections.
7. Appoint a committee on brains in each high school, whose duty it shall be to counsel with, stimulate, and inspire the supernormal, to the end that society's brain power shall be conserved.—*High School Research Bulletin, Los Angeles*.

Principles and Types of Curricular Development

(Continued from page 172)

The third step in this study of mathematics consists of an effort to discover valid materials which pupils can and should learn. This includes inventories of the mathematical elements found in other school subjects and in widely read magazines. For example, there has been a study of the specific geometrical concepts which facilitate general reading and the frequency of occurrence of unusual fractions.

Tentative Courses in Thirty Schools

Guided by the hypotheses stated in the first step, by the inventories of mathematical attainments, and by data upon the uses made of mathematics, tentative mathematical topics and teaching materials were prepared for experimental use in 30 cooperating schools. After cooperative trial, criticism, and tests the materials have been revised for further trial. The seventh-grade material is now in use for the third year, having undergone two revisions.

What is involved in trial of curricular materials in cooperating schools? It is attempted to divide the seventh-grade pupils into two groups as nearly equivalent in mathematical ability as measurement and judgment will permit; to one group the experimental materials are taught as prepared, to the other group, the conventional mathematical course is taught; achievement tests are given to both groups at the beginning and the end of the year; the teacher keeps a systematic record of the successes, failures, and interests of the pupils; whether explanations regarding the experimental materials were sufficient, practice materials adequate, terminology clear, the extent to which subject matter relates to the children's experiences, and the suitability of projects that were used. The cooperating teachers, when they have finished teaching a given unit of material, make systematic reports on prepared blanks.

Distribution of Drill and Practice

These records help to determine the proper distribution of drill and practice work, and the need for fixing learning through cumulative review which consists of new applications of previously learned principles.

What are the outstanding characteristics of these courses? Four will be mentioned: Geometry materials which deal with practical measurements and graphic presentation of facts are organized after the ideals of the laboratory

method. There is a definite effort to utilize a wider range of sensory experiences. By means of construction, measurement, inference, generalization, and verification, pupils are initiated in experimental and scientific methods of learning.

Effective Learning Through Social Situations

Social and economic materials are organized in the form of projects—often group undertakings—in which meaning rather than skill is the desideratum. More effective learning is secured through the use of social, human situations which are appreciated by the pupils. Materials in the course are written not only for the pupil but to the pupil.

The basic skills in computation—common fractions, decimals, percentages, and common-sense estimating—are organized in a series of timed practice exercises. This makes it possible for each pupil to progress at his own rate and to measure his daily growth. The evidence is definite that such practice exercises will secure accuracy, absence of which makes much mathematical work almost absurd.

With these two types in mind, and recognizing clearly that two types only can not be fully foundational to all that is to be said about principles which should guide in curricular development, I wish now to state certain educational principles which it seems should be clearly defined for use in reorganization of the school subjects of study.

School Work Must Be Engaging

Most persons who are trying to improve the subjects of study now believe that children learn best, retain longest, and find learning most usefully available when school work is engaging and genuine, not repulsive and artificial. Those who hold this view believe that more and not less effort is made by pupils when they are occupied by engaging in real work; hence if more effort is made more educational growth may be secured. It is not believed, however, that all pupils are all the time held to high effort merely by the holding power of vital subject matter, but it is believed that subject matter should be so selected and used that more should be gained than has been from its inherent significance to pupils. It is not claimed that a more vital subject-matter content will of itself insure desired educational results, but this is one of the indispensable requirements for improvement. Until we know more than anyone now knows about children and about proper subject content there will continue to be plenty of need for some kinds of guiding and exacting but intelligently supported com-

pulsions beside those the pupil recognizes as inherent in the value of the subjects he studies. There is, however, a very much larger place than has been utilized for new and meaningful types of content in subjects of study. This statement is by no means new, but is old only as a statement; it has not yet effected very extensive changes in actual subject content. It is much harder to accomplish the needed changes than to see clearly that changes are needed. The latter, for each school subject, requires prolonged and careful classroom trials with school children. Indeed, it is possible that comparative trials may show that some whole subjects may profitably be omitted or others added.

Should Encourage Mutual Teaching

Children learn much from one another, and instead of the still too common practice of discouraging communication and mutual assistance, the school atmosphere and the organization of the subjects of study should encourage such mutual pupil teaching as may pertain to the particular subject content upon which they are engaged. Subjects of study should be selected and organized so as to facilitate teaching of pupils by one another. The topics and content of studies should be such that pupils can come into mutual and cooperative mastery of them.

Pupils Must Succeed in School Subjects

Pupils develop fastest when engaged most of the time upon things in which they succeed, not fail. Educational efforts must usually result in success if further effort is to be carried on with fervor and wholeheartedness. When a college entrance examiner recently stated that "a college entrance examination in physics should not permit over 60 per cent of those taking it to pass," he was supporting and promoting one of the most serious situations in modern education. The one-third who do not pass, together with the large number of others who were advised not to try the examination, are living and discouraged exponents of a situation so set up as to be almost hopeless educationally for most of those thus discouraged. Incomplete and imperfect learning and consequent failure are needlessly depressing. They are needlessly costly in money, school space, and human life, since those who fail have not moved on to the next level of achievement. Subjects should be so selected and used that more pupils succeed, in order that later success may also be had. No fear that there will not be enough failures remaining to provide ample occupation for those teachers who through

sheer arbitrary discipline wish to engage in the occupation of goading failures into mediocre success.

Educational Process Must be Cooperative

If school is training for social effectiveness, the school institution must itself be socially effective. To be so the educational processes must be cooperative, and the activities and procedures which enter into the school's organization must be used as true subject-matter material. When this is not done, the different members of the school community live a false life under the guise of preparing for a later real life out-of-school. Democratic education begins within the school by use of the school itself, else the school must fail in part of its social contribution to its pupils. This means that school curricula and methods must be participated in by pupils, and that the school's own organization is a part of the school's curricular possession, not a personal possession of the administrative officers. If this is true, it means that administration must secure a closer relation with the school subjects than is now common. Needs for school funds, school buildings, general organization have caused too wide a separation between administration and the real work of the schools.

Learning Dependent upon Number of Senses

There is an oft-stated principle, still too little used in curricular planning, to the effect that pupils learn best when their minds are approached by senses and materials other than those which relate primarily to words. Our education has become one of much words. It is not likely that any modern educator wishes to reduce the use of reading or language, or other use of printed forms of expression, but there is too large an omission of fundamental experiences which involve touch, taste, sight. We interpret by means of sense experiences. We gain desire and ability to read, to reflect, to memorize; we create visions of things good to do, or things to be avoided by use of experiences, which involve senses not now fully used in the subjects of study. It is so much easier to organize and use subjects of study as organized printed pages, as assignments to be reproduced in recitation, than it is to use assignments as follow-up discussions of situations derived from experience. We have fallen into a conventional education of words. Again my point contains nothing new; but again must it be clear that we have assented to platform argument and then proceeded to act as we did before. Subjects of study have not changed as have our theories of what subjects are for. Our advance in prin-

ciples and ideals to which we assent have outrun our progress in practice in the use of school subjects.

Practice Must Effectuate Theory

An explanation of the disparity between educational principles and ideals on one side and school practices on the other seems reasonably clear. Educational theorists and philosophers have engaged in statements and argumentation which were abstractly appealing to their readers and audiences, and when asked concerning specific things to do in prosaic school rooms have replied that those are details to be worked out by an enlightened teaching profession. This diverting by-play, when serious, betrays an unfounded confidence in the productive capacity, available time, and energy of most members of the teaching profession. It overlooks or evades the fact that most difficult of all is the task of improving the courses of study with which the profession deals. It overlooks the fact that school practices are not likely to be changed suddenly from their present position to the very advanced position outlined by new principles and ideals, but that school practices evolve from what is. Biologically and sociologically, things which are have come rather directly from things which have been, and from much of our educational theory nothing has come. It has recently been said that "the theorists failed to create a machinery of books, methods, and teachers to carry out their theories. Ideas will never be carried out unless they are embodied in machinery. So when the theorists failed to develop new machinery for their new conceptions, the old machinery already in use in the schools—the old books, old methods, and old points of view—continued to function in the old way."

Confusion Not Destructively Disconcerting

The relative satisfaction with the definiteness of the present subjects of study as compared with the confusion produced when changes in content and method are introduced often seems to be an argument in favor of leaving things as they are. Similar confusion as to the aims of education is also cited as reason for waiting until aims are more clearly defined. But aims are sufficiently clear to show many people the necessity of change, and, pragmatically, our aims can not be finally stated until after trial and measurement it is found what can really be accomplished. Fortunately teachers and investigators in various school systems all over the country have accepted the necessary complications resulting from efforts to change the content of sub-

Instruction in Business Rapidly Extending

More than 100 Higher Institutions Teach Commercial Subjects in Regularly Organized Schools or Departments

ADVERTISING and merchandising are taught as subjects of college grade in more than 100 colleges and universities in all parts of the country, according to the United States Bureau of Education Commercial Education Circular No. 12, the first of a series of circulars on business training courses of college grades. Of 104 institutions teaching business subjects, 43 have established special schools or colleges for the purpose. Two assign these subjects to the school of economics, and one to the school of political science.

For the special school, the title of school or college of commerce is used by 13 institutions, including the University of California and the University of North Carolina. Seven call it the school or college of business, while others use such titles as school of finance and commerce or school of commerce and business administration. Harvard and New York University have graduate schools of business administration, and New York University has also an undergraduate school, called the school of commerce, accounts, and finance.

Variety of Designations Used

The University of Wisconsin and the University of North Dakota group their business courses under the title, "Course in commerce." Georgetown University includes this work in the curriculum of its "School of foreign service," and Simmons College has a school of secretarial studies. Eighteen colleges that do not have special schools for business subjects have organized these subjects under special departments, such as the department of business administration and banking in Colorado College and the department of commercial engineering in the Carnegie Institute of Technology, while 14 place business subjects under the department of economics, and 22 have departments with a title such as department of economics and business administration or department of economics and business.

jects of study, and have found the confusion not destructively disconcerting. Rather have they found that constructive improvement of subjects awaken teachers to new confidence in the progress of education.

Systematic Training For Teachers of Immigrants

New York Began the Work in 1915. More than Seven Thousand Teachers Have Been Trained. Three Lines of Instruction. Teachers Must Be Acquainted with Characteristics and Needs of Groups They Teach. Other Qualities Needed

By ROBERT T. HILL

New York State Department of Education

RESPONSIBILITY in the promotion and development of an adequate program of adult elementary immigrant education in the State of New York by State educational authorities began chiefly with the training of teachers. This was in 1915, so that during a period of seven or eight years the desirability and necessity of the special training of teachers in the development and extension of a system of education adequate to meet needs, has been well demonstrated.

In New York, as in other States, during the war period, much of this effort was popularly and generally known as "Americanization," but of all efforts which have been carried on throughout the country in the name of "Americanization" perhaps those which are primarily educational in character are those which are most continuous and permanent. Such educational developments have called for material development of program and policy concerning evening and extension schools and classes of all sorts. Special programs of organization and effort, special methods in the technique of teaching, and newly organized standards of administration, supervision, and inspection of such educational effort are necessary.

Material Progress in Recent Years

In all of these various directions the public schools in the State of New York have been making material progress during recent years. As a result the enrollment, average attendance, and number of those completing various courses of instruction in the evening and extension schools of the State have been noticeably marked. Recent statistics show that during the school year July 1, 1920-21, 82,490 immigrants were registered in evening and extension schools and classes in the State; and during the year July, 1921-22, 94,463 immigrants were enrolled.

Adult education in practically all its forms is voluntary, so that attendance depends largely on the character and efficiency of instruction. This is of particular importance among foreign-born people whose educational experience has been limited, and whose economic and social limitations in America hinder persistent and continuous effort, particularly after working hours. For these and other reasons teachers of more than ordinary skill are positively essential. In

the State of New York efforts to develop adequate teacher training have extended generally in three directions or along three different lines:

(1) Teachers are expected to be trained in the technique of teaching the special subjects for which they are engaged. The teaching of elementary English to non-English-speaking people involves such principles and special methods of teaching that special courses of training are necessary. (2) For best service among immigrant people it is desirable for teachers to be acquainted with their racial, social, economic, political, cultural, and religious backgrounds. Thus instruction may be related to the particular characteristics and needs of various immigrant groups. (3) It is also desirable for teachers to familiarize themselves with basic and fundamental matters respecting American political institutions and government so that they may be equipped to answer questions and explain the things incidental to American community and political life with which the immigrant is unfamiliar.

Special Training Increases Efficiency

Incidentally the same qualities are required for teaching in this special field that are necessary for most efficient service in any field of teaching—personality, motive, attitude, and general competency. Even with these, however, a well-equipped teacher will have his efficiency increased manyfold by special training. This is true in special fields of teaching, such as physical training, kindergarten, commercial subjects, science or domestic arts, and it is also true in the case of elementary education for non-English-speaking adults.

The program of teacher training in immigrant education during the recent three or four years, until adequate appropriations failed, is indicated somewhat by the fact that during the summer and school year from July 1, 1921, to June 30, 1922, 66 different training courses of at least 30 hours each were held in more than 20 different communities of the State. The enrollment in these various courses reached the total of 2,231 persons, of whom 1,306 successfully completed all of the required work and secured State recognition. All of these courses were conducted on the college or university extension teaching plan, so that 881 of those enrolled were

also able to secure regular college or university credit.

As all of these courses were held jointly with colleges and universities in the State, a system of financial cooperation was developed which enabled whatever State funds there were to be largely extended in usefulness. Those enrolling in courses who desired university credit have been required to pay regular tuition fees for such credit and to that extent they assisted in the financial conduct of the courses. In some places local boards of education assisted.

Classes in Every Section of State

Beginning in a somewhat experimental way during 1915 and 1916 the program of teacher training in the State has been extended and enlarged so that during the whole period of about seven years, and particularly during the last three years, 190 different courses for the training of teachers have been given in the State with a total registration of 7,055 persons. Practically every section of the State has been reached with courses on methods of teaching; immigrant backgrounds; American immigrant communities; American political institutions and Government; immigration and immigration policies; the immigrant woman—her problems and education; administration and supervision of evening schools; factory classes—their organization and conduct; and other courses most useful in the development of an adequate corps of teachers for service.

In addition, conferences, demonstration lessons, and improved administration and supervision have tended to raise and perfect teaching standards. Positive results in the way of increased registration, better percentage of attendance, larger appropriations for evening and extension schools, increased popular support and improved relations between the native and foreign-born bear witness to the beneficial effects of a type of teacher training which is adequate, in part at least, to meet conditions and needs.

State Aids Local Effort

One of the features which has secured substance and permanence for all such effort is the reimbursement law which provides State aid to the cities and localities of the State to an amount equal to one-half of the salary paid to teachers of immigrants up to but not in excess of \$1,000 per teacher. Many communities of the State are taking advantage of this liberal aid.

The program of adult immigrant education as a definite part of the educational program of the State has become firmly established with general recognition by public school authorities and teachers.

New Books in Education

By JOHN D. WOLCOTT, *Librarian, Bureau of Education*

BAXTER, LEON H. *Toycraft*. Milwaukee, Wis., The Bruce publishing company [1922] 132 p. illus. 12°.

This manual furnishes definite instructions for the making of toys for boys and girls by the children themselves. The author is director of manual training in the public schools of St. Johnsbury, Vt.

CANADA. BUREAU OF STATISTICS. Statistical report on education in Canada, 1921. Published by authority of the Hon. J. A. Robb, minister of trade and commerce. Ottawa, F. A. Acland, printer, 1923. 184 p. tables. 8°.

This is the first of a series of annual reports of Canadian education, based upon the operation of a new scheme of coordinated statistics of education recently adopted. The volume is bilingual, with the tables and text in both English and French.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. Seventeenth annual report of the president and of the treasurer. New York city, 1922. vii, 211 p. tables. 4°.

Besides the usual sections on the business of the foundation and on old-age annuities and pensions, this report discusses the subject of the rising cost of public education, including the causes of this increase, normal and invisible factors, the purpose of schools, and the relation of the teacher's pay to the quality of the service that he renders to society. The writer asserts that at no distant day free public education will be endangered if the cost of the schools continues to grow at the present rate, or, as seems more probable, at an increased rate.

CHARTERS, W. W. *Curriculum construction*. New York, The Macmillan company, 1923. xii, 352 p. tables. 8°.

The author comments on the historical fact that profound changes in the aims of education due to revolutions in world thought have been followed repeatedly by tardy and incomplete changes in the curriculum of the schools. He asserts that the standards of our day demand that our courses of study be derived from objectives which include both ideals and activities, and that we should accept usefulness as our aim rather than comprehensive knowledge. The book elaborates and criticizes the theories of curriculum construction as observed in the history of education, then analyzes and describes the recent technique of curriculum construction, and finally presents a number of special studies relating to particular subjects and courses.

COMMITTEE FOR THE STUDY OF NURSING EDUCATION. *Nursing and nursing education in the United States*. Report of the Committee for the study of nursing education, and report of a survey by Josephine Goldmark, secretary. New York, The Macmillan company,

1923. xvii, 585 p. diagrs., tables, forms. 8°.

Most of this volume is taken up by the report of a survey of nursing and nursing education by the secretary of the committee. The report is comprehensive, covering the functions of the nurse, both public and private, and the training of the nurse in hospital schools, in subsidiary nursing groups, in university schools of nursing, and in postgraduate and other nursing courses.

JUDD, CHARLES H., and others. *Rural school survey of New York State. Administration and supervision*. Ithaca, N. Y., 1923. 629 p. diagrs., tables. 12°. (Director of survey: George A. Works, Ithaca, N. Y.)

This report comprises sections prepared by various members of the survey staff on the common-school district, the supervisory district, medical inspection, principles of organization and administration, the State system of examinations, the community unit, and State schools of agriculture. The general summary and recommendations are the work of Prof. Judd. The great need of rural education in New York is for an improved system of administration and supervision which will command popular approval and support. The present common-school district is wholly inadequate to maintain satisfactory school conditions. The present system of rural-school supervision does not operate satisfactorily. The survey staff accordingly recommends that the common-school districts of the State be grouped together into natural community units having community boards of education.

McMURRY, OSCAR L., EGGERS, GEORGE W., and McMURRY, CHARLES A. *Teaching of industrial arts in the elementary school*. New York, The Macmillan company, 1923. vii, 357 p. illus. 8°.

This is a school plan for the industrial arts worked out in combination by the authors through a series of years. The articulation in a vital way of the problems of designing with those of construction is one of the distinctive features. Two principal phases of construction—woodwork and bookmaking—are elaborated in the treatment of the subject.

PALMER, HAROLD E. *The oral method of teaching languages; a monograph on conversational methods, together with a full description and abundant examples of fifty appropriate forms of work*. Yonkers-on-Hudson, N. Y., World book company, 1922. 134 p. fold. plan. 12°.

The principles and value of the oral method are first presented and followed by a classified collection of forms of work suitable for use in an oral course.

RICHARDS, CHARLES R. *Art in industry; being the report of an industrial art*

survey conducted under the auspices of the National society for vocational education and the Department of education of the State of New York. New York, The Macmillan company, 1922. 499 p. 8°.

This report aims to present a picture of actual conditions relating to the practice of applied designs in the United States, to the end that intelligent measures for its improvement may be developed. The survey involved the assistance of 88 individuals who served on trade and school committees, as well as many others prominent in the art industries. It represents a study of 510 producing establishments located in 55 different cities, as well as of 55 schools giving instruction in industrial art.

SINCLAIR, UPTON. *The goose-step; a study of American education*. Pasadena, Calif., The author [1923] x, 488 p. 12°.

In this volume the author presents his conclusions from a study of American education made by him during the past year. He finds that our educational system is not a public service but an instrument of special privilege. He characterizes and criticizes a large number of American educators and educational institutions.

SPENCER, ANNA GARLIN. *The family and its members*. Philadelphia and London, J. B. Lippincott company [1923] 322 p. 12°. (Lippincott's family life series, ed. by B. R. Andrews.)

The theses maintained in this book are, first, that the monogamic, private family is a priceless inheritance from the past and should be preserved; second, that in order to preserve it many of its inherited customs and mechanisms must be modified to suit new social demands; and, third, that present-day experimentation and idealistic effort already indicate certain tendencies of change in the family order which promise needed adjustment to ends of highest social value. The two concluding chapters deal with the family and the school and "the father and the mother state."

THWING, CHARLES FRANKLIN. *Human Australasia; studies of society and of education in Australia and New Zealand*. New York, The Macmillan company, 1923. 270 p. 12°.

During a recent visit to Australia and New Zealand, Dr. Thwing interviewed many of the leading men in government circles and in the fields of education, literature, and labor. His book is primarily an analysis and interpretation of the human element in these countries. Both these peoples of the Southern hemisphere, he says, bear peculiar affinities to another branch of the English race, the United States of America, and the course of development of all three seems likely to be similar. One entire chapter of the book is devoted to the higher and other education. The subjects of relations of the white and colored races, religion, social standards, and contributions to be expected to the world's civilization, are also discussed.

Fiscal Administration and Cost of Schools

(Continued from page 170)

arate financing of schools does not result in extravagance. There is practically no difference in the total expenditure for all school purposes per pupil in average daily attendance as between the cities in which schools are separately financed and those in which the school budget is determined by the general municipal authority. The significant differences with respect to fiscal administration are such as to leave the question of the desirability of one form of administration as over against the other to be determined by other considerations.

Independent Boards Make Better Showing

The cities in which the boards of education are in complete control of the finances of the school system, including the right to levy taxes, show a larger tax rate, a larger percentage of the total municipal tax rate devoted to schools, a larger expenditure per pupil in average daily attendance for general control, for maintenance of plant, for fixed charges, capital outlay, and debt service, than do the dependent. On the other hand, the communities in which the boards of education are dependent upon the general municipal authority show a larger bonded indebtedness per capita, a larger expenditure for instructional service. The technique employed in determining which of these differences were significant were applied as well to certain educational factors reported in Doctor Frasier's study entitled "Fiscal control of city-school systems." It was found that the independent cities showed a greater percentage of 16 and 17 year old children enrolled in the schools; that they provided a larger percentage of their pupils with 60 or more square feet of playground space each; that a larger percentage of the children enrolled attended school all day in adequate school buildings owned by the city. It appeared that the dependent cities had a somewhat larger percentage of women elementary school-teachers who had six or more years of training beyond the grade of the elementary school.

In the light of the evidence made available by this inquiry it seems fair to propose that the question of the separate financing of municipal school systems be considered on grounds other than that of the cost to the community of the schools administered under the one or the other form of organization.

Pennsylvania Still Spends Too Little

Expenditures for Education in the Past Were Not Sufficient to Keep State in Front Rank. Recent Increases Have Not Been Excessive.

Report to Citizens' Committee

THAT INCREASING the expenditure for Pennsylvania schools was a wise policy—in fact, an absolute necessity—and that the State would be warranted in devoting a still larger proportion of its wealth to education than it does at present are conclusions reached by Harlan Updegraff and Leroy A. King, professor and assistant professor of educational administration in the University of Pennsylvania, who were chosen by a citizens' committee appointed by Gifford Pinchot, now governor of the State, to make a survey of the State's fiscal policies in the field of education. To evaluate the present situation a study was made of the cost of education and the tax rates in other States and in Pennsylvania for a long term of years. Comparison of Pennsylvania's record from 1870 to 1920 with the record of six other States and with that of the United States as a whole showed Pennsylvania in a low position during that time. This means, says the report, that taking them man for man, as compared with citizens of other States, Pennsylvanians have not put so much money into education during those 50 years as have New York, New Jersey, Massachusetts, California, Ohio, and Iowa.

A considerable increase in the cost of public schools of the State was brought about by the passage of educational legislation in 1919 and 1921. Twenty-six per cent of the State income now goes to the support of the elementary and secondary schools controlled by the local school districts and to the support of the normal schools and higher educational institutions. Whether this support should be continued in its present form and extent, and, if not, what modifications are desirable, were the fundamental questions to be answered by this study.

In the decade 1910-1920 Pennsylvania gradually lost ground, as compared with other States, in the development of her schools, as shown by her loss in rank

among the States of the Union in such respects as the per cent of school population attending school daily, average days attended by each child of school age, average number of days schools were kept open, and proportion of high-school attendance to total attendance. Salaries and qualifications of teachers were relatively low, and the standing of pupils, as shown by the results of standard tests, was likewise low.

Possibly the best index of the ability of a State to support schools is furnished by a comparison of the income of its inhabitants with that of the inhabitants of other States. Pennsylvania's income per capita in 1919 was \$683, with 18 States ranking higher. However, in the school year 1918-19 there were 38 States with a higher percentage of expenditure by the State government for schools than Pennsylvania. Other data are presented from which the writers of the report infer that the present costs of Pennsylvania schools are near the norm for the United States as a whole but below the norm for the Northern States; that the local taxes required are probably no higher than the average; that the amounts of money granted by the State when measured both as to per cent of total expenses and by the cost per capita are near the norm, and that in the appropriation of total expenses going to the support of schools Pennsylvania is below the average.

Taken all in all, therefore, the practice of other States in the Union justifies an increase in the State appropriations for education rather than an increase in the local tax, according to the report; but increases in the latter may still be made without burdening the people unduly. Other studies include the method of distribution of State aid, the efficiency of the department of public instruction, and the relation of this department to the public schools, normal schools, and institutions of higher education.

Their Education Was Practical

To demonstrate that their education was practical, 35 young women students, seniors in the school of home economics at the Oregon State Agricultural College, accepted the invitation of a Portland hotel to cook and serve a dinner to its guests. Twelve of the girls cooked the dinner and the other 23 served it.

The Educational Finance Inquiry Commission expects to be able to send its first series of reports to the press within the next three months. In these documents, when they are available, will be found significant data not only in the fields mentioned in this brief statement but with respect to many others of the fiscal problems confronting school administrators.

Motor Trucks an Excellent Investment

*Montgomery County, Ala., Operates 34 in Transporting Children to School.
Early Difficulties Overcome by Watchful Care. A New Era Has Arisen in
the County's Educational Conditions*

TRANSPORTATION is the foundation upon which the consolidated school stands, and for this reason is the greatest factor determining the success or failure of the consolidated project, says a bulletin issued jointly by the county board of education of Montgomery County, Ala., and the county chamber of commerce. This county has 17 consolidated schools, all of which have been developed since 1917. A survey made in that year showed that Montgomery County had a school system not worthy of the name, says the bulletin. The schools were mostly of the one or two-teacher type in almost any kind of schoolhouses, with little furniture. After this survey a program was planned to give the children a larger type of school, modern buildings, a richer curriculum, better-trained teachers, and facilities for transportation from distances.

Motor-Drawn Vehicles Are Best

In its experience with the problem of transportation, the school authorities came to the conclusion that the motor-drawn vehicle must be used. Many difficulties arose in operating the trucks, and they found that this kind of transportation involves the expenditure of a great deal of money for upkeep. The county board of education which thinks it can operate trucks without making adequate plans for their maintenance has a failure waiting for itself just around the corner, says the bulletin.

A successful system of transportation is now in operation, using 34 trucks, all but 2 of which are the property of the board. Twenty-six men are employed on full time to drive these trucks and keep them in repair. These men also assist with the repair work of the school and do other work on the school plant, such as assisting in developing athletic fields and playgrounds. At one school the truck drivers were able to save nearly \$100 by unloading and hauling coal. Most of the drivers are grown men; the board employs six schoolboy drivers; but they were carefully selected. The school authorities have found that generally the truck is better cared for when in charge of a grown man.

Daily Reports of Mechanical Condition

Eight of the trucks were bought five years ago and are still in first-class condition in spite of difficulties at first encountered. The trucks are now given the

best of care in the matter of greasing, cleaning, repairing, etc. Each mechanic files a daily report in the principal's office, showing work done on trucks. A special blank form is provided so that the mechanic need only check certain items. This report is examined by the superintendent of transportation. Any accident in which any person is hurt or the truck delayed for more than an hour or such damage done that new parts are required for the truck must be reported at once on a special form. Besides these reports a weekly and monthly report by each driver is presented to the principal of each school, showing number of miles traveled, gallons of gasoline used, number of tardy arrivals, and other information. The principal totals the weekly reports and makes a monthly report to the county superintendent of education.

Honor Roll for Careful Drivers

When the mechanics and drivers learned to oil trucks properly 50 per cent of the transportation troubles disappeared, and when they learned to tighten loose nuts another 25 per cent of troubles were overcome. An honor roll is kept on which no truck is listed unless it makes at least 10 miles for every gallon of gasoline consumed during the week.

The longest transportation route in Montgomery County is 23 miles, this distance being traveled by a group of senior high-school pupils, and the shortest route is 3 miles. Most of the trucks make second trips, which are shorter than the first one of the day. The average number of miles each child travels daily is 11.1 miles. Extremely long routes are considered undesirable.

To transport 1,846 children last year cost the board \$25.17 for each child, or 15 cents a day. Each truck required an expenditure of \$98.75 per month, including all running and overhauling expenses.

Patrons' Fears Have Been Overcome

When transportation was introduced into the county many persons were afraid that their children would be hurt or even killed by accidents to the trucks, but this fear has been overcome, and now the county board of education finds it difficult to provide transportation for all who want it. Transportation lines have become congested by families who have moved from the city or from other places to be in reach of one of the con-

solidated schools of this county. There seems to be no desire to move close to the school buildings. Instead it appears that more people are moving to the ends of the lines than to any other place.

Besides enabling children to get a high-school education who otherwise could not have it, the transportation system has given many other advantages to the people of the county. By encouraging acquaintance among children living many miles apart it breaks up the isolation which has been threatening to destroy rural life. This sometimes results in forming ties of friendship among the parents. Such organizations as Boy Scouts, which could not have existed before consolidation was established, now flourish and are continued throughout the summer vacation.

Since the teachers can use the trucks as well as the pupils, they do not need to depend on boarding houses near the schoolhouse but can choose among various places, while some can live at home.



Many British Teachers Still Unemployed

The president of the board of education recently gave some interesting figures in the House of Commons regarding the number of teachers who had left college in July, 1922, and had not yet obtained posts. In England 610 men and 559 women left universities to take up teaching, and 115 men and 72 women have been unable to obtain posts. From other training colleges came 1,263 men and 4,072 women, and of these 84 men and 285 women failed to obtain positions.

In Wales 138 men and 92 women left universities to become teachers, and 45 men and 25 women have not yet found positions, while 183 men and 328 women left ordinary colleges, and 46 men and 80 women have not obtained positions.

In addition to these numbers there are many teachers who have been dropped as a result of the increase in the size of classes and the closing of small schools.—*Fred Tait*.



A campus covering 9 acres is planned for the down-town division of the Northwestern University. On this piece of ground, which is situated 1 mile from Chicago's "loop" and faces Lake Michigan, will be placed buildings for the medical and dental schools of the university, and also for a teaching hospital, a clinic, and a school of commerce, as well as dormitories, commons, gymnasium, and two auditoriums. An athletic field is also planned.

Educational Relations With Latin America

Increasing Demand for Information Reported by Pan-American Union. American Colleges Offer Instruction in Spanish

TO STIMULATE mutual interest between the United States and the countries of South America, the Section of Education of the Pan American Union diffuses information about various phases of education in the different countries. Many requests for information are received from Latin-American public officials, teachers, students, and educational institutions, according to the annual report for 1922 recently submitted by F. J. Yanes, assistant director in charge of the section. These questions touch on such matters as courses of study in professional schools, educational legislation in the various States, vocational study, reform schools, and many other educational subjects.

Desire for Information Increases

Economic conditions have hampered educational progress in some of these countries, preventing many young Latin-Americans from pursuing courses in the United States, but the desire for information on educational conditions in the United States seems to be increasing in spite of this, for the correspondence carried on by the Section of Education was greater during the past year than in the preceding year.

Many letters are received asking about higher education in the United States, and in order to spread information on this subject a new edition of a pamphlet in Spanish has been prepared by the section and 500 copies distributed among South American educational officials and others interested in education. Special articles on education in the United States are occasionally prepared and sent to the Latin American press, and six such articles were sent last year.

Fosters Correspondence Between School Children

The section assisted in preparing material on education in Latin America which was presented to the Pan American Conference of Women held at Baltimore last year. Student associations, women's clubs, and other groups have been provided with information to be used in preparation of addresses, study programs, etc. In its desire to foster a keen interest in everything relating to the history, the literature, and the general culture of the people of the Americas the section has taken an active part in furthering the exchange of school correspondence between children in the

United States and those in the Latin American countries.

Extent of Instruction in Spanish

To obtain information as to the extent to which Spanish and Portuguese are studied in the United States a questionnaire was sent to the 612 colleges and universities listed in the educational directory by the United States Bureau of Education. Of the 404 institutions that replied all but 21 teach Spanish. Nineteen of these colleges and universities reported that more than 500 students were studying Spanish, Columbia University enrolling 3,000 in Spanish language courses, and seven other institutions between 1,000 and 2,000. Twelve of these institutions teach Portuguese also.

During the year the section planned the tour of an eminent Argentine professor, who visited 18 educational institutions in the United States, giving a series of lectures showing Latin American culture and progress.



About 500 American teachers studied in the University of Mexico during July and August, 1922, taking such courses as Spanish language, history of Mexico and of Latin America in general, archaeology, and art. Pleasure trips to different towns and other points of interest in the country were included in the courses, the Government of Mexico granting many privileges to the American students.

PRINCIPAL ARTICLES IN THIS NUMBER

- Recent Developments in Medical Education - *N. P. Colwell, M. D.*
- Fiscal Administration and Cost of Schools - - *George D. Strayer*
- Principles and Types of Curricular Development - *Otis W. Caldwell*
- Make Washington Schools the Nation's Model
- Kansas City's Special Teachers' Library - - - *Clara Louise Voigt*
- Dutch Investigate Physical Training - - - - - *P. A. Diels*
- Good Work by Virginia Community Leagues - - - *J. C. Muerman*
- Outside Reading of High School Students - - - *Fred LeRoy Homer*
- Consolidation of Schools in Iowa - - - - - *James F. Abel*
- Systematic Training for Teachers of Immigrants - - *Robert T. Hill*
- Motor Trucks an Excellent Investment

Intensive Study Combined With Travel

Army Transport Transformed into Floating School. Four Hundred Young Men Will Make Trip Around the World

AS THE FIRST attempt in history to transfer the campus of a junior college to the deck of an ocean-going ship, the Candler Floating School is unique in education. Sailing from Baltimore on September 15 next, the steamship *Logan* will carry 400 representative American boys and young men, and will visit all the principal cities of the world in a nine months' cruise, combining the attractions of travel with the benefits of intensive study, under a faculty selected from the leading American universities.

The ship will visit London, Edinburgh, Antwerp, Havre, Gibraltar, Barcelona, Marseilles, Nice, Monaco, Naples, Athens, Constantinople, Jaffa, Port Said, Bombay, Colombo, Calcutta, Rangoon, Singapore, Batavia, Manila, Hongkong, Shanghai, Nagasaki, Yokohama, Honolulu, Hilo, San Francisco, Panama, Colon, Habana, and Bermuda.

Lectures on the places visited will precede sightseeing expeditions. The school will comprise a junior college (the first two years of a liberal arts course) and the last two years of a standard high school.

The idea of the school was developed by Lieut. Col. E. T. Winston, United States Army, retired, whose untimely death occurred recently. Mr. Asa G. Candler, Jr., of Atlanta, is president of the Candler Floating School Co., and Dean Zebulon Judd, of the Alabama Polytechnic Institute, will be educational director.



Special Classes for Subnormal Children

Connecticut is providing for her 3,500 backward and subnormal children, and more than 40 classes are reported as already formed in Bridgeport, Hartford, Manchester, New Haven, Somersville, Stamford, Torrington, and Waterbury. More than 600 children have been placed in these classes, an average of 15 children to each class. The majority of these children are undoubtedly subnormal to some extent, belonging to the definitely feeble-minded, the border line, and the dull normal groups. Some schools have two types of classes—one for children who are definitely feeble-minded and one for those who are merely backward.